CITY COUNCIL AGENDA ITEM COVER MEMO

Agenda Item Number: ____________

Meeting Type: Regular

Meeting Date: May 12, 2016

Action Requested By: Engineering

Agenda Type: Resolution

Subject Matter:

Agreement between the City of Huntsville and Amec Foster Wheeler Environment & Infrastructure, Inc.

Exact Wording for the Agenda:

Resolution authorizing the Mayor to enter into an agreement between the City of Huntsville and Amec Foster Wheeler Environment & Infrastructure, Inc. for Engineering Design Services for Pedestrian Access and Redevelopment Corridor (PARC) TIGER Grant Application from Holmes Avenue to the Lowe Mill District, Project No. 71-16-DR08

Note: If amendment, Please state title and number of the original

Item to be considered for: Action

Unanimous Consent Required: No

Briefly state why the action is required; why it is recommended; what council action will provide, allow and accomplish and; any other information that might be helpful.

Resolution for engineering design and grant writing services for a multimodal corridor between Holmes Avenue and Lowe Mill District adjacent to Huntsville Spring Branch. The design will include TIGER grant writing services, three (3) pedestrian bridges across existing channels, one (1) pedestrian sky bridge across US Hwy 231, one (1) railroad bridge and stream restoration to include decorative landscaping and lighting for purposes of connecting multiple residential communities to job centers in Downtown and Lowe Mill with alternate means of transportation. Design services in a Not-to-Exceed Ceiling Price of $1,947,875.00.
Account No. 3080-71-00000-527000-PR8219XX

Associated Cost: $1,947,875.00

Budgeted Item: ____________

MAYOR RECOMMENDS OR CONCURS: ____________

Department Head: Kathy Martin

Date: 5/3/16

ROUTING SLIP
CONTRACTS AND AGREEMENTS

Originating Department: **Engineering** Council Meeting Date: **5/12/2016**

Department Contact: **Lameka Carter** Phone # **256-427-5304**

Contract or Agreement: **Engineering Design Services**

Document Name: **AMEC-Pinhook Creek and Huntsville Spring Branch Design Project No. 71-16-DR08**

City Obligation Amount: **$1,947,875.00**

Total Project Budget: **$1,947,875.00**

Uncommitted Account Balance: **0**

Account Number: **3080-71-00000-527000-PR8219XX**

Procurement Agreements

Not Applicable	**Not Applicable**

Grant-Funded Agreements

Not Applicable	**Grant Name:**

Department	Signature	Date
1) Originating	Kathy Mack	5/2/16
2) Legal	Mary Cates	5/4/16
3) Finance	M Dargan	5-5-16
4) Originating		
5) Copy Distribution		
a. Mayor's office (1 copies)		
b. Clerk-Treasurer (Original & 2 copies)		

Revised 04/15/2011

RESOLUTION NO. 16-_____

BE IT RESOLVED by the City Council of the City of Huntsville, Alabama, that the Mayor be, and is hereby authorized, to enter into an agreement between the City of Huntsville and Amec Foster Wheeler Environment & Infrastructure, Inc. in the amount of ONE MILLION NINE HUNDRED FORTY-SEVEN THOUSAND EIGHT HUNDRED SEVENTY-FIVE AND NO/100 DOLLARS ($1,947,875.00) for Engineering Design Services for Pedestrian Access and Redevelopment Corridor (PARC) TIGER Grant Application from Holmes Avenue to the Lowe Mill District, Project No. 71-16-DR08, in Huntsville, Alabama, on behalf of the City of Huntsville, a municipal corporation in the State of Alabama, which said agreement is substantially in words and figures similar to that document attached hereto and identified as "Agreement between City of Huntsville and Amec Foster Wheeler Environment & Infrastructure, Inc. for Engineering Design Services for Pedestrian Access and Redevelopment Corridor (PARC) TIGER Grant Application from Holmes Avenue to the Lowe Mill District, Project No. 71-16-DR08" consisting of a total of nineteen (19) pages plus sixty-seven (67) additional pages consisting of Attachments 1-16, and the date of May 12, 2016, appearing on the margin of the first page, together with the signature of the President or President Pro Tem of the City Council, and an executed copy of said document being permanently kept on file in the Office of the City Clerk of the City of Huntsville, Alabama.

ADOPTED this the 12th day of May, 2016.

_____
President or President Pro Tem of
the City Council of the
City of Huntsville, Alabama

APPROVED this the 12th day of May, 2016.

_____
Mayor of the City of Huntsville,
Alabama

AGREEMENT BETWEEN

CITY OF HUNTSVILLE, ALABAMA

AND

AMEC FOSTER WHEELER ENVIRONMENT &

INFRASTRUCTURE, INC.

FOR

ENGINEERING DESIGN SERVICES

FOR

PEDESTRIAN ACCESS AND REDEVELOPMENT CORRIDOR

(PARC) TIGER GRANT APPLICATION FROM HOLMES AVENUE

TO THE LOWE MILL DISTRICT

Project I.D Number 71-16-DR08
May 12, 2016

President or President Pro Tem of the City Council of the City of Huntsville, AL
Date: May 12, 2016

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AGREEMENT BETWEEN
CITY OF HUNTSVILLE, ALABAMA
AND
AMEC FOSTER WHEELER ENVIRONMENT & INFRASTRUCTURE, INC.
FOR
ENGINEERING DESIGN SERVICES
FOR
PEDESTRIAN ACCESS AND REDEVELOPMENT CORRIDOR (PARC) TIGER GRANT APPLICATION FROM HOLMES AVENUE TO THE LOWE MILL DISTRICT
Project I.D Number 71-16-DR08

THIS AGREEMENT made as of the 12th day of May in the year 2016, by and between the CITY OF HUNTSVILLE, ALABAMA (hereinafter called OWNER), and AMEC FOSTER WHEELER ENVIRONMENT & INFRASTRUCTURE, INC., (hereinafter called ENGINEER).

WITNESSETH, for the considerations hereinafter set forth, the parties hereto agree as follows:

ARTICLE 1 - ENGAGEMENT OF THE ENGINEER

The OWNER hereby engages the ENGINEER, and the ENGINEER hereby accepts the engagement to provide general engineering and consultation as a representative of the OWNER to include the following:

1.1 Professional engineering services for design of Pedestrian Access and Redevelopment Corridor (PARC) TIGER Grant Application from Holmes Avenue to the Lowe Mill District, as further described in ARTICLE 2, and hereinafter called PROJECT.

1.2 By executing this Agreement, the ENGINEER represents to the OWNER that the ENGINEER is a professional qualified to act as the ENGINEER for the PROJECT and is licensed and certified to practice engineering by all public entities having jurisdiction over the ENGINEER and the PROJECT. The ENGINEER further represents to the OWNER that the ENGINEER will maintain all necessary licenses, certifications, permits or other authorizations necessary to act as ENGINEER for the PROJECT until the ENGINEER's remaining duties hereunder have been satisfied. The ENGINEER shall assign only qualified personnel to perform any service concerning the PROJECT. All services rendered by the ENGINEER for the PROJECT shall be performed by or under the immediate supervision of experienced and qualified professionals licensed, certified, and registered as appropriate in the State of Alabama possessing the expertise in the discipline of the service being rendered. The ENGINEER assumes full responsibility to the OWNER for the negligent acts, errors and omissions of its consultants or others employed or retained by the ENGINEER in connection with the PROJECT.

1.3 Execution of this Agreement by the ENGINEER constitutes a representation that the ENGINEER has become familiar with the PROJECT site and the local conditions under which the PROJECT is to be implemented. The ENGINEER agrees to provide all necessary

engineering services required to professionally accomplish the ENGINEER's defined scope of services.

ARTICLE 2 – DESIGN SERVICES OF THE ENGINEER

2.1 ENGINEER shall provide for OWNER professional engineering services for design of Pedestrian Access and Redevelopment Corridor (PARC) TIGER Grant Application from Holmes Avenue to the Lowe Mill District.

2.2 These services shall include consultation and advice; customary civil, structural, mechanical and electrical engineering design services; and Architectural services incidental thereto, as outlined herein and further described in the SCOPE OF SERVICES, ATTACHMENT 1.

2.3 Upon the OWNERS authorization, the ENGINEER shall prepare construction documents consisting of drawings and specifications setting forth in detail the requirements for construction of the PROJECT. The ENGINEER warrants that such construction documents are accurate, coordinated and adequate for the construction and in conformity and comply with applicable laws, codes and regulations. Products specified for use shall be readily available unless written authorization to the contrary is given by the OWNER. Products or materials specified by the ENGINEER that are available from only one source shall be justified in writing by the ENGINEER in order to meet applicable federal, state, or local procurement or bid requirements.

2.4 The ENGINEER shall prepare appropriate bid alternates as necessary in order to assure that the PROJECT can be awarded within the PROJECT budget limitations.

2.5 The ENGINEER shall serve as the OWNER's professional representative in those portions of the PROJECT to which this Agreement applies and shall consult with and advise the OWNER during the performance of these services.

2.6 The ENGINEER shall incorporate into its design, and into its final work products, the requirements contained within the OWNER's engineering standards, standard specifications, and design manuals referenced in ATTACHMENT 3. The ENGINEER shall also incorporate into its design, where applicable, Americans with Disabilities Act (ADA) grades, elevations and layout for each handicap ramp within the project. The requirements of the State of Alabama Department of Transportation design standards shall be reviewed for applicability and incorporated into portions of the work where joint participation between the OWNER and the State is applicable. When conflicts are noted between the OWNERS requirements and standards of others, the OWNERS standards shall take precedent. Discrepancies shall be brought to the attention of the OWNER. Deviations from OWNER's requirements shall be identified to the OWNER by the ENGINEER in writing prior to incorporating the changes.

2.7 The ENGINEER shall obtain all Planning Commission approvals with regard to location, character and extent, as required.

2.8 The ENGINEER shall obtain a Utility Project Notification Form (Attachment 10) from all affected utilities on the project by the 60% design review stage. Acceptance shall be provided as a signed original by all affected parties at the 90% design review stage.

2.9 The ENGINEER shall promptly correct, or have corrected, any errors, omissions, deficiencies or conflicts in the ENGINEER's work product or that of his sub-contractors/sub-consultants, without additional compensation for time, reproduction or distribution.

2.10 During the process of design and preparation of the construction documents, the ENGINEER shall review with the OWNER the construction documents, the estimate of probable

construction cost, schedule, and other design services issues. Such review shall be, at a minimum, as outlined in ATTACHMENT 4 as 0%, 30%, 60%, and 90% completion stage. Following such reviews, the ENGINEER shall make any appropriate revisions thereto to assure compliance with the OWNER's requirements.

2.11 Field surveying work is required and shall be performed in accordance with "Standards of Practice for Surveying in the State of Alabama" as required by the Alabama Board of Registration for Engineering and Land Surveyors. Surveying shall include P.K. Nails or other permanent stationing markings as well as staking of right-of-way, easements and parcels of land acquired by the City of Huntsville. Property corners shall be set at the new right-of-way. Easements shall be staked as requested by the City of Huntsville. The above field work shall be performed as a minimum as needed at the time of right-of-way acquisition and one additional time near the 100% submittal stage as determined by the OWNER. The cost for these services is included in the fees for Basic Services.

Survey data shall be based on a US Public Land Survey System corner or quarter corner. Said corner or quarter corner shall be field verified by the surveyor and a state plane coordinate provided in deliverables submitted to the City of Huntsville. All survey work shall be based on the following datum's:

Coordinate System:	US State Plane
Zone:	Alabama East 0101
Vertical Datum:	The North American Vertical Datum of 1988 (NAVD 88)
Horizontal Datum:	The North American Datum of 1983 (NAD 83)
Geoid Model:	Geoid03
Units:	US Survey Feet

2.12 The ENGINEER shall comply with the City of Huntsville Tree Ordinance and carry the requirements referenced therein with deliverables (drawings, specifications, etc.) in accordance with Section 27-57 of the City of Huntsville Code of Ordinances (Ord. No. 04-45, §13, 2-12-2004).

2.13 The ENGINEER shall prepare the pre-bid agenda after obtaining comments from stakeholders such as affected utilities, City of Huntsville Construction Project Engineer and Inspector(s), and other City of Huntsville departments as applicable. The ENGINEER shall moderate the pre-bid meeting, prepare meeting minutes, make clarifications, prepare addendums, and distribute to bidders.

2.14 A valid City of Huntsville license shall be maintained throughout the term of this contract. Additionally, the engineering firm shall be required to obtain and pay for all other federal, state or local permits, licenses, and fees which may be necessary or required in order to perform the work detailed herein.

ARTICLE 3 - CONSTRUCTION ADMINISTRATION SERVICES OMITTED

ARTICLE 4 - ADDITIONAL SERVICES

The following services of the ENGINEER are not included in Article 2. Nevertheless, the ENGINEER shall provide such services if authorized in writing by the OWNER, and they shall be paid for by the OWNER as provided in Article 7, unless otherwise noted.

4.1 Making revision in drawings, specifications or other documents when such revisions are

inconsistent with written direction by the OWNER previously given, are required by the enactment of revision of codes, laws or regulations subsequent to the preparation of such documents and not reasonably anticipated, or are due to other causes not within the control or responsibility of the ENGINEER, either in whole or in part.

4.2 Preparing drawings, specifications and supporting data in connection with change orders, provided that such change orders are issued by the OWNER due to causes not within the control or responsibility of the ENGINEER, either in whole or in part.

4.3 Providing additional services for repair or replacement of work damaged by acts of God or other cause during construction provided that such services are required by causes not the responsibility of the ENGINEER, either in whole or in part.

4.4 Providing services not otherwise required herein which are made necessary solely by the default of the ENGINEER or major defects or deficiencies in the work of the ENGINEER. These services shall be provided with no increase in the contract amount and will not be compensable on an hourly basis.

4.5 Providing expert witness services and other services arising out of claims.

4.6 Provide services to stake site during construction.

ARTICLE 5 - RESPONSIBILITIES OF OWNER

The OWNER, without cost to the ENGINEER, will perform the following in a timely manner so as not to delay the services of the ENGINEER:

5.1 Assist ENGINEER by placing at ENGINEER's disposal all available information pertinent to the PROJECT including previous reports and any other data relative to design or construction of the PROJECT.

5.2 Provide all criteria and full information as to OWNER's requirements for the PROJECT, including design objectives and constraints, space, capacity and performance requirements, flexibility and expendability, and any budgetary limitations. The OWNER shall also furnish copies of all design and construction standards, which OWNER will require to be included in the drawings and specifications.

5.3 Assist the ENGINEER as necessary in acquiring access to and making all provisions for the ENGINEER to enter upon public and private lands as required for the ENGINEER to perform the work under this agreement.

5.4 Designate in writing a person to act as the OWNER's representative with respect to the work to be performed under this Agreement, such person to have complete authority to transmit instructions, receive information, interpret and define the OWNER's policies and decision with respect to materials, equipment elements and systems pertinent to the work covered by this Agreement. Examine all studies, reports, sketches, drawings, specifications, proposals and other documents presented by ENGINEER, obtain advice of an attorney, insurance counselor and other consultants as OWNER determines appropriate for such examination and render in writing decisions pertaining thereto within a reasonable time so as not to delay the services of ENGINEER.

5.5 When requested by the ENGINEER, the OWNER will intercede on the ENGINEER's behalf when data from, or reviewed by third parties is not on schedule through no fault of the ENGINEER

enactment of revision of codes, laws or regulations subsequent to the preparation of such documents and not reasonably anticipated, or are due to other causes not within the control or responsibility of the ENGINEER, either in whole or in part.

4.2 Preparing drawings, specifications and supporting data in connection with change orders, provided that such change orders are issued by the OWNER due to causes not within the control or responsibility of the ENGINEER, either in whole or in part.

4.3 Providing additional services for repair or replacement of work damaged by acts of God or other cause during construction provided that such services are required by causes not the responsibility of the ENGINEER, either in whole or in part.

4.4 Providing services not otherwise required herein which are made necessary solely by the default of the ENGINEER or major defects or deficiencies in the work of the ENGINEER. These services shall be provided with no increase in the contract amount and will not be compensable on an hourly basis.

4.5 Providing expert witness services and other services arising out of claims.

4.6 Provide services to stake site during construction.

ARTICLE 5 - RESPONSIBILITIES OF OWNER

The OWNER, without cost to the ENGINEER, will perform the following in a timely manner so as not to delay the services of the ENGINEER:

5.1 Assist ENGINEER by placing at ENGINEER's disposal all available information pertinent to the PROJECT including previous reports and any other data relative to design or construction of the PROJECT.

5.2 Provide all criteria and full information as to OWNER's requirements for the PROJECT, including design objectives and constraints, space, capacity and performance requirements, flexibility and expendability, and any budgetary limitations. The OWNER shall also furnish copies of all design and construction standards, which OWNER will require to be included in the drawings and specifications.

5.3 Assist the ENGINEER as necessary in acquiring access to and making all provisions for the ENGINEER to enter upon public and private lands as required for the ENGINEER to perform the work under this agreement.

5.4 Designate in writing a person to act as the OWNER's representative with respect to the work to be performed under this Agreement, such person to have complete authority to transmit instructions, receive information, interpret and define the OWNER's policies and decision with respect to materials, equipment elements and systems pertinent to the work covered by this Agreement. Examine all studies, reports, sketches, drawings, specifications, proposals and other documents presented by ENGINEER, obtain advice of an attorney, insurance counselor and other consultants as OWNER determines appropriate for such examination and render in writing decisions pertaining thereto within a reasonable time so as not to delay the services of ENGINEER.

5.5 When requested by the ENGINEER, the OWNER will intercede on the ENGINEER's behalf when data from, or reviewed by third parties is not on schedule through no fault of the ENGINEER

5.6 The OWNER's review of any documents prepared by the ENGINEER or its consultants shall be solely for the purpose of determining whether such documents are generally consistent with the OWNER's intent. No review of such documents shall relieve the ENGINEER of its responsibility for the accuracy, adequacy, fitness, suitability and coordination of its work product.

ARTICLE 6 - PERIOD OF SERVICES

6.1 The ENGINEER shall commence services pursuant to this agreement as of May 13, 2016. The final completion date for the completion of design services as outlined in Article 2 shall be May 31, 2017.

The ENGINEER shall perform these services with reasonable diligence and expediency consistent with sound professional practices. The ENGINEER shall include in his schedule an allowance for time required for OWNER's review of submissions and for approvals of authorities having jurisdiction over the PROJECT. When approved by the OWNER, the schedule shall not be exceeded by the ENGINEER, except for cause.

If the ENGINEER becomes aware of delays due to time allowances for review and approval being exceeded, delay by the OWNER, the OWNER's consultants, or any other reason beyond the ENGINEER's control, which may result in the schedule of performance of the ENGINEER's services not being met, the ENGINEER shall promptly notify the OWNER. If the OWNER becomes aware of any delays or other causes that will affect the ENGINEER's schedule, the OWNER shall promptly notify the ENGINEER. In either event, the ENGINEER's schedule for performance of its services shall be equitably adjusted.

ARTICLE 7 - PAYMENT TO THE ENGINEER

7.1 BASIC SERVICES

The OWNER shall compensate the ENGINEER for services rendered pursuant to this Agreement, excepting those services described as Additional Services in Article 4 of this Agreement, by payment of the NOT-TO-EXCEED CEILING PRICE OF ONE MILLION NINE HUNDRED FORTY-SEVEN THOUSAND EIGHT HUNDRED SEVENTY-FIVE AND NO/100 DOLLARS ($1,947,875.00) for design services as described in Article 2. Additional services of the ENGINEER as described in Article 4, if any, shall be compensated on an hourly basis in accordance with Attachment 5.

7.2 REIMBURSABLE EXPENSES

The scope of work for sub-contracted services is defined in the ENGINEER's scope of services, Attachment 1. The scope includes provisions for administration expenses for subcontracted services and reimbursable direct expenses including but not limited to laboratory tests and analyses; computer services; word processing services; permit fees, bonds, telephone, printing, binding and reproduction charges; and other similar costs. Indirect costs will have administrative fee reimbursements limited to no more than 5%. Direct costs are also limited to no more than 5% reimbursement.

Reimbursable expenses shall be limited during the term of this agreement as stated in Art. 7.1 Basic Services.

7.3 NOT TO EXCEED (NTE) CEILING

NTE Ceiling price. The City of Huntsville (COH) will not be obligated to pay the ENGINEER any amount in excess of the NTE ceiling price as per Attachment "1", and the ENGINEER shall not be obligated to continue performance if to do so would exceed the NTE ceiling price

set forth in the referenced attachment, unless and until the COH notifies the ENGINEER in writing that the NTE ceiling price has been increased and specifies in the notice a revised NTE ceiling that shall constitute the NTE ceiling price for performance under this contract. NTE ceiling price increase will be done by a written unilateral change order to the contract issued by the OWNER that will not require the ENGINEER's approval. When and to the extent that the NTE ceiling price set forth in the referenced attachment has been increased, any hours expended and material costs incurred by the ENGINEER in excess of the NTE ceiling price before the increase shall be allowable to the same extent as if the hours expended and material costs had been incurred after the increase in the NTE ceiling price.

7.4 EFFECTIVE DATE

This contract shall have no force or effect unless and until it is executed by the OWNER and the ENGINEER and a properly executed copy is mailed to the ENGINEER with a notice to proceed (NTP). If a NTP is not issued within sixty (60) days commencing from the last date of execution of this CONTRACT by the OWNER and the ENGINEER, then this CONTRACT shall be NULL AND VOID, the OWNER will not be obligated to any payment to the ENGINEER and the ENGINEER will not be obligated to perform any work under said CONTRACT.

PAYMENT SUMMARY

Engineering Design Services – Not-to-Exceed (NTE) Ceiling Price of	$1,947,875.00
TOTAL CONTRACT AMOUNT:	**$1,947,875.00**

ARTICLE 8 - GENERAL PAYMENT PROCEDURE

8.1 INVOICES

8.1.1 The ENGINEER shall submit monthly invoices to the Administrative Officer in the Engineering Department, for the basic services described under Articles 2 and 4 for the design of the PROJECT. Invoices must include the City of Huntsville project name and number, dates of services, contract amount, previous billings and current billing. Additionally, invoices for services that are not contracted for as "lump sum" in Article 4 must also be itemized and include, as a minimum, a description of each task performed, the amount of time utilized performing each task, the name(s) of personnel who performed the task and the cost for each specific task. Along with each invoice, the ENGINEER must submit a consultant progress report in the format shown in Attachment 6 hereto. No payment will be made without the consultant progress report completed and attached. Monthly progress reports shall be submitted monthly even if no request for payment is made. If services under Article 4 are included in the invoice for additional services not included under the lump sum provisions, or services billed as time and material, the classification and hours of such persons rendering the services shall be attached to the invoice.

8.1.2 The signature of the ENGINEER on the invoice shall constitute the ENGINEER's representation to the OWNER that the services indicated in the invoice have progressed to the level indicated, have been properly and timely performed as required herein, that the reimbursable expenses included in the invoice have been reasonably incurred, that all obligations of the ENGINEER covered by prior invoices have been paid in full, and that, to the best of the ENGINEER's knowledge, information and informed belief, the amount requested is currently due and owing,

there being no reason known to the ENGINEER the payment of any portion thereof should be withheld. Submission of the ENGINEER's invoice for final payment and reimbursement shall further constitute the ENGINEER's representation to the OWNER that, upon receipt from the OWNER of the amount invoiced, all obligations of the ENGINEER to others, including its consultants, incurred in connection with the PROJECT, have been paid in full. ENGINEER must designate on Attachment 6 – Progress Report in the appropriate space provided that such action has been completed.

8.2 TIME FOR PAYMENT

The OWNER shall make payment for services in Articles 2 and 4 within 60 days of receipt of valid invoice.

8.3 OWNER'S RIGHT TO WITHHOLD PAYMENT

In the event the OWNER becomes credibly informed that any representations of the ENGINEER, provided pursuant to Article 8.1.2, are wholly or partially inaccurate, the OWNER may withhold payment of sums then or in the future otherwise due to the ENGINEER until the inaccuracy, and the cause thereof, is corrected to the OWNER's reasonable satisfaction. Additionally, failure by the ENGINEER to supply substantiating records shall be reason to exclude related costs from the amounts which might otherwise be payable by the OWNER to the ENGINEER.

8.4 REIMBURSABLE EXPENSES

8.4.1 In addition to the requirements set forth in 8.1 above, invoices for reimbursable expenses shall include such documentation as the OWNER may require. Reasonable expenses are limited to the following expenses:

(a) Transportation outside the immediate Huntsville area (50 mile radius) approved in advance by the OWNER in writing and incurred in connection with the PROJECT; (Per Department of Treasury, Internal Revenue Service Publication 1542, Per Diem Rates, for travel within the continental United States). Refer to website: www.irs.gov/pub/irs-pdf/p1542.pdf for more information.
(b) Charges for long-distance communications;
(c) Fees paid for securing approval of authorities having jurisdiction over the PROJECT,
(d) Actual costs of reproduction for items in excess of those included in the required services;
(e) Postage and handling charges incurred for drawings, specifications and other documents.

8.4.2 The ENGINEER shall set forth with particularity on its invoice the nature and cost of the expense item being billed, and attach to its invoice the written authorization, if any, required for such item; and shall bill expenses at actual cost or prevailing rate and without the addition of administrative charge, any multiple or surcharge.

8.5 W-9 TAXPAYER FORM

All ENGINEERING FIRMS are required to submit a Federal Tax Form W-9 to City of Huntsville at the time a contract is awarded. No payments of invoices can be made until this W-9 Tax Form has been properly submitted. A copy of the W-9 Tax Form can be requested from the OWNER or at the following website: www.irs.ustreas.gov/pub/irs-pdf/fw9.pdf

ARTICLE 9 - GENERAL CONSIDERATIONS

9.1 GENERAL

OWNER and ENGINEER agree that the following sections and provisions shall apply to the work to be performed under this Agreement and that such provisions shall supersede any conflicting provisions of this Agreement.

9.2 SUB-CONTRACTED SPECIALIZED SERVICES

The ENGINEER may sub-contract specialized services required of the PROJECT to competent and experienced sub-consultants approved by the OWNER in writing. As a prime professional, the ENGINEER shall act as OWNER's representative for contracting, directing, and managing the services of sub-consultants. The OWNER shall have the right to reject any consultant provided that the OWNER raises a timely objection. At the time of the execution of this Agreement, the parties anticipate that the consultants listed in Attachment "7" hereto will be retained by the ENGINEER to provide services with respect to the PROJECT. Expenses payable to the ENGINEER for subcontracted services are limited to no more than 5% of the cost of the subcontracted services.

9.3 PEER REVIEW

The OWNER reserves the right to conduct, at the OWNER"s expense, peer review of designs and drawings prepared by the ENGINEER and/or sub-consultant(s) for the PROJECT. The ENGINEER and sub-consultant(s) agree that knowledge and consent to review of their work by other engineers of the OWNER's choosing is hereby given in accordance with the ADMINISTRATIVE CODE (RULES AND REGULATIONS) of the Alabama State Board of Licensure for Professional Engineers and Land Surveyors, Chapter 330-X-14-.06(a) (13) effective January 2008 and as may be amended now or in the future pertaining to the Code of Ethics for review of the work of another engineer.

9.4 CLARIFICATION OF WORK

If reviewing agencies raise questions regarding the work of ENGINEER, OWNER will participate in such meetings as deemed necessary to explain and clarify this work.

9.5 CHANGES

9.5.1 The OWNER may, at any time by written order, make changes within the general scope of the Agreement in the services to be provided. If such changes cause an increase or decrease in ENGINEER's cost of, or time required for performance of any services, whether or not changed by any order, an equitable adjustment shall be made and the Agreement shall be modified in writing accordingly. Upon notification of change, ENGINEER must assert any claim of ENGINEER for adjustment in writing within 30 days from the date of receipt unless OWNER grants a further period of time.

9.5.2 If findings in any phase of this PROJECT significantly alter the scope of work for subsequent phases, or if regulations are changed resulting in a scope of work change for any phase, engineering fees set forth in Article 7 may be renegotiated by the OWNER and ENGINEER.

9.6 ENGINEER'S RECORDS

Documentation accurately reflecting services performed and the time expended by the ENGINEER and his personnel and records of reimbursable expenses shall be prepared

concurrently with the performance of the services and shall be maintained by the ENGINEER. The ENGINEER shall maintain record copies of all written communications, and any memoranda of verbal communications related to the PROJECT. All such records and documentation shall be maintained for a minimum of five (5) years after the PROJECT date of final completion or for any longer period of time as may be required by law or good practice. If the ENGINEER receives notification of a dispute or of pending or commencement of litigation during this five-year period, the ENGINEER shall continue to maintain all PROJECT records until final resolution of the dispute or litigation. The ENGINEER shall make such records and documentation available to the OWNER upon notice and shall allow the authorized representative(s) of the OWNER to inspect, examine, review and copy the ENGINEER's records at the OWNER's reasonable expense.

9.7 SEAL ON DOCUMENTS

9.7.1 Final plans and drawings shall be marked "ISSUED FOR CONSTRUCTION". When a firm, partnership, or corporation performs the work, each drawing shall be sealed and signed by the licensed engineer or engineers who were in responsible charge of the work.

9.7.2 When plans and drawings issued for construction were not performed by a firm, partnership, or corporation, the first sheet or title page shall be sealed, dated, and signed by the engineer who was in responsible charge. Two or more licensed professional engineers may affix their signatures and seals provided it is designated by a note under the seal the specific subject matter for which each is responsible. In addition, each drawing shall be sealed and signed by the licensee or licensees responsible for each sheet.

9.7.3 When plans or drawings are a site adaptation of a standard design or plan or make use of a standard drawing of others, the ENGINEER shall take measures to assure that the site adaptation, standard drawing, or plan is appropriate and suitable for the use proposed by the ENGINEER including meeting the specific site conditions, functionality, design criteria, safety considerations, etc. After taking such measures, the ENGINEER shall seal the standard drawing or plan as shown above in sections 9.8.1 and 9.8.2. The ENGINEER shall not utilize standards of others without their written consent where written consent is required or implied.

9.7.4 Each sheet of documents, specifications, and reports for engineering practice and of maps, plats, charts, and reports for land surveying practice, shall be signed, sealed, and dated by the licensed engineer or land surveyor who prepared the documents or under whose responsible charge the documents were prepared. Where more than one sheet is bound together in one volume, including but not limited to reports and specifications, the licensee who prepared the volume, or under whose responsible charge the volume was prepared, may sign, seal, and date only the title or index sheet, provided that this sheet clearly identifies all of the other sheets comprising the bound volume, and provided that any of the other sheets which were prepared by, or under the responsible charge of, another licensee, be signed, sealed, and dated by the other licensee.

9.8 USE AND OWNERSHIP OF DOCUMENTS

All rights of ownership, copyrights, construction documents, including all drawings, specifications and other documents, electronic media, computer source code, or things prepared by or on behalf of the ENGINEER for the PROJECT are hereby transferred to the OWNER and shall be the sole property of the OWNER and are free of any retention rights of the ENGINEER. The ENGINEER hereby grants to the OWNER an unconditional right to use

or to refer to, for any purpose whatsoever, the construction documents and any other documents or electronic media, computer source code prepared by or on behalf of the ENGINEER for the PROJECT, free of any copyright claims, trade secrets or other proprietary rights with respect to such documents. The ENGINEER shall be permitted to retain copies thereof for its records. The ENGINEER's documents and other work products are not intended or represented to be suitable for re-use by OWNER or others on extensions of the PROJECT or on any other PROJECT. Any re-use without specific written verification or adaptation by ENGINEER will be at OWNER's sole risk and without liability or legal exposure to ENGINEER, and OWNER shall indemnify and hold harmless ENGINEER from all claims, damages, losses and expenses including attorneys' fees arising out of, or resulting from, such reuse by the OWNER; provided however, that this agreement to indemnify and save harmless shall not apply to any reuse of documents retained by, or through, the ENGINEER.

9.9 ESTIMATE OF CONSTRUCTION COST

Since ENGINEER has no control over the construction cost of labor, materials, or equipment, or over the construction contractor(s) methods of determining prices, or over competitive bidding or market conditions, his opinion of probable PROJECT cost or construction cost provided for herein are to be made on the basis of his experience and qualifications and represent his best judgment as a design professional familiar with the construction industry; but, ENGINEER cannot and does not guarantee that proposals, bids or construction costs will not vary from opinions of probable cost prepared by him. If OWNER wishes greater assurance as to the construction cost, he will employ an independent cost estimator.

9.10 TERMINATION FOR CAUSE

This Agreement may be terminated by either party upon seven (7) days written notice to the other should such other party fail substantially to perform in accordance with its material terms through no fault of the party initiating the termination.

9.11 TERMINATION BY THE OWNER WITHOUT CAUSE

The OWNER may terminate this Agreement without cause upon seven (7) days written notice to the ENGINEER. In the event of such a termination without cause, the ENGINEER shall be compensated for all services performed prior to termination, together with Reimbursable Expenses incurred. In such event, the ENGINEER shall promptly submit to the OWNER its invoice for final payment and reimbursement which invoice shall comply with the provisions of Paragraph 8.1.

ARTICLE 10 - INDEMNITY AND INSURANCE

10.1 INSURANCE

The ENGINEER shall carry insurance of the following kinds and amounts in addition to any other forms of insurance or bonds required under the terms of the contract specifications. The ENGINEER shall procure and maintain for the duration of the job until final acceptance by the OWNER, or as later indicated, insurance against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the work hereunder by the ENGINEER, his agents, representatives, employees or subcontractor.

10.2 MINIMUM SCOPE OF INSURANCE:

A. General Liability:

Insurance shall be written on an "occurrence" basis. Claims-made coverage will be accepted only on an exception basis after the OWNER's approval. The same insurance company should write General Liability Coverage and OWNERs ENGINEERs Protective Insurance.

B. Commercial General Liability

Products and Completed Operations
Contractual
Personal Injury
Explosion, Collapse and Underground
Broad Form Property Damage

C. Professional Liability:

Insurance may be written on a "claims-made" basis, providing coverage for negligent acts, errors or omissions in the performance of professional services. Coverage shall be maintained for a discovery and reporting period of no less than five (5) years after completion of the professional services and Certificates of Insurance shall be submitted to the OWNER on a yearly basis during this time frame. Coverage shall be no less comprehensive than that which is carried by at least 25% of the registered engineers or engineering firms contracting in the State of Alabama. Such coverage shall be carried on a continuous basis including prior acts coverage to cover the subject PROJECT. The professional liability insurance shall contain contractual liability coverage.

D. Automobile Liability:

Business Automobile Liability providing coverage for all owned, hired and non-owned autos. Coverage for loading and unloading shall be provided under either automobile liability or general liability policy forms.

E. Workers' Compensation Insurance:

Statutory protection against bodily injury, sickness or disease or death sustained by employee in the scope of employment. Protection shall be provided by a commercial insurance company or a recognized self-insurance fund authorized before the State of Alabama Industrial Board of Relations. "Waivers of Subrogation" in favor of the OWNER shall be endorsed to Workers' Compensation Insurance.

F. Employers Liability Insurance:

Covering common law claims of injured employees made in lieu of or in addition to a worker's compensation claim.

10.3 MINIMUM LIMITS OF INSURANCE:

A. General Liability:

Commercial General Liability on an "occurrence form" for bodily injury and property damage:

$ 2,000,000 General Aggregate Limit
$ 2,000,000 Products - Completed Operations Aggregate
$ 1,000,000 Personal & Advertising Injury
$ 1,000,000 Each Occurrence

B. Professional Liability:

Insurance may be made on a "claims-made" basis:

$ 500,000 Per Claim - Land Surveyors
$ 1,000,000 Per Claim - Other Professionals

C. Automobile Liability:

$ 1,000,000 Combined Single Limit per accident for bodily injury and property damage.

D. Workers' Compensation:

As required by the State of Alabama Statute

E. Employers Liability:

$ 1,000,000 Bodily Injury by Accident or Disease
$ 1,000,000 Policy Limit by Disease

10.4 OTHER INSURANCE PROVISIONS:

The OWNER is hereby authorized to adjust the requirements set forth in this document in the event it is determined that such adjustment is in the OWNER's best interest. If the insurance requirements are not adjusted by the OWNER prior to the OWNER's release of specifications with regard to the PROJECT in question, then the minimum limits shall apply. The City of Huntsville/OWNER shall be named on the policies of general liability and automobile insurance and on the certificate of insurance as an Additional Insured. Additional Insured status on the Commercial General Liability policy shall be through ISO Additional Endorsement CG 20 10 11 85 or equivalent and coverage shall be afforded on a primary basis.

The policies are to contain, or be endorsed to contain, the following provisions:

A. All Coverage:

The ENGINEER is responsible to pay all deductibles. Each insurance policy required by this clause shall be endorsed to state that coverage shall not be suspended, voided, canceled, non-renewal or materially changed by either party, reduced in coverage or in limits except after thirty (30) days' prior written notice by certified mail, return receipt requested, has been given to the OWNER. Cancellation of coverage for non-payment of premium will require ten (10) days written notice to the OWNER.

10.5 ACCEPTABILITY OF INSURERS:

Insurance is to be placed with insurers authorized by the State of Alabama with an A. M. Best rating of A-V or better.

10.6 VERIFICATION OF COVERAGE:

The OWNER shall be indicated as a Certificate Holder and the ENGINEER shall furnish the OWNER with Certificates of Insurance reflecting the coverage required by this document. The A. M. Best rating and deductibles, if applicable, shall be indicated on the Certificate of Insurance for each insurance policy. The certificates for each insurance policy are to be signed by a person authorized by that insurer to bind coverage on its behalf and must be an original signature. Certificates signed using digital signatures will not be accepted unless accompanied by a written statement from the insurance/surety company indicating that their electronic signature is intended as their signature. All certificates are to be received and approved by the OWNER before work commences. The OWNER reserves the right to require complete, certified copies of all required insurance policies at any time.

10.7 CONSULTANTS AND/OR SUBCONTRACTORS WORKING FOR THE ENGINEER:

The ENGINEER shall furnish separate certificates and/or endorsements for each subcontractor and/or consultant showing insurance of the same type or types and to the extent of the coverage set forth in this Article 10.

10.8 HOLD HARMLESS AGREEMENT:

A. Professional Liability Exposures:

The ENGINEER, to the fullest extent permitted by law, shall indemnify and hold harmless the OWNER, its elected and appointed officials, employees, agents, and representatives against all claims, damages, losses, judgments and expenses, including, but not limited to, attorney's fees, arising out of or resulting from the performance of the work, caused by any negligent act, error or omission of the ENGINEER or any of their consultants, or anyone directly or indirectly employed by them or anyone for whose acts they are legally liable. Such obligation should not be construed to negate, abridge, or otherwise reduce any other right or obligation of indemnity, which would otherwise exist as to any party or person, described in this paragraph.

To the fullest extent permitted by law, the ENGINEER shall defend, protect, indemnify, and hold harmless the OWNER, its elected and appointed officials, officers, directors, employees, agents, and representatives from and against any and all liability, claims, demands, damages, loss, costs, fees and expenses (including actual fees and expenses of attorneys, expert witnesses, and other consultants) for infringement of patent rights, copyrights, or other intellectual property rights, except with respect to designs, processes or products of a particular manufacturer expressly required by the OWNER in writing. If the ENGINEER has reason to believe the use of a required design, process or product is an infringement of a patent, the ENGINEER shall be responsible for such loss unless such information is promptly given to the OWNER

B. Other Than Professional Liability:

The ENGINEER agrees, to the fullest extent permitted by law, to defend, protect, indemnify and hold harmless the OWNER, its elected and appointed officials, officers, directors, employees, agents, and representatives from and against any and all liability, claims, demands, damages, loss, judgments, costs, fees, and expenses (including actual fees and expenses of attorneys, expert witnesses, and other consultants) attributable to personal injury, including bodily injury sickness, disease or death, or to injury to or destruction of tangible property, including loss of use

resulting therefrom actually or allegedly caused by the ENGINEER or the ENGINEER's consultants, subcontractors, or suppliers, including, without limitation, any breach of contract or any negligent acts, errors, or omissions in the performance of the professional services provided pursuant to or as a result of this Agreement. Neither, the OWNER nor the ENGINEER shall be obligated to indemnify the other party in any manner whatsoever for the other parties own negligence.

ARTICLE 11- MISCELLANEOUS PROVISIONS

11.1 GOVERNING LAW

This Agreement shall be governed by the law of the State of Alabama.

11.2 INTENT AND INTERPRETATION

11.2.1 The intent of this contract is to require complete, correct and timely execution of the work. Any work that may be required, implied or inferred by the contract documents, or any one or more of them, as necessary to produce the intended result shall be provided by the ENGINEER.

11.2.2 This contract is intended to be an integral whole and shall be interpreted as internally consistent. What is required by any one contract document shall be considered as required by the contract.

11.2.3 When a word, term or phrase is used in this contract, it shall be interpreted or construed, first, as defined herein; second, if not defined, according to its generally accepted meaning in the engineering industry; and third, if there is no generally accepted meaning in the engineering industry, according to its common and customary usage.

11.2.4 The words "include", "includes", or "including", as used in this contract, shall be deemed to be followed by the phrase, "without limitation".

11.2.5 The specification herein of any act, failure, refusal, omission, event, occurrence or condition as constituting a material breach of this contract shall not imply that any other, non-specified act, failure, refusal, omission, event, occurrence or condition shall be deemed not to constitute a material breach of this contract.

11.2.6 Words or terms used as nouns in this contract shall be inclusive of their singular and plural forms, unless the context of their usage clearly requires a contrary meaning.

11.3 TIME IS OF THE ESSENCE

Time limitations contained herein, or provided for hereby, are of the essence of this Agreement. The ENGINEER understands and acknowledges that time is of the essence in completion of the PROJECT and that the OWNER will incur damages if the PROJECT is not completed on time.

11.4 SUCCESSORS AND ASSIGNS

The ENGINEER shall not assign its rights hereunder, excepting its right to payment, nor shall it delegate any of its duties hereunder without the written consent of the OWNER. Subject to the provisions of the immediately preceding sentence, the OWNER and the ENGINEER, respectively, bind themselves, their successors, assigns and legal representatives to the

other party to this Agreement and to the successors, assigns and legal representatives of such other party with respect to all covenants of this Agreement. Nothing herein shall be construed as creating any personal liability on the part of any officer or agent of any public body that may be party hereof, nor shall it be construed as giving any rights or benefits hereunder to anyone other than OWNER and ENGINEER.

11.5 NO THIRD-PARTY BENEFICIARIES

This Agreement shall inure solely to the benefit of the parties hereto and their successors and assigns. Nothing contained herein is intended to or shall create a contractual relationship with, or any rights in favor of, or any cause of action in favor or, any third party, against the OWNER or the ENGINEER.

11.6 INTELLECTUAL PROPERTY/ CONFIDENTIALITY

All information, documents, and electronic media, computer source code furnished by the OWNER to the ENGINEER belong to the OWNER, are considered proprietary and confidential, unless otherwise indicated by the OWNER, and are furnished solely for use on the OWNER's PROJECT. Such information, documents, and electronic media, computer source code shall be kept confidential by the ENGINEER, shall only be released as necessary to meet official regulatory requirements in connection with the PROJECT, and shall not be used by the ENGINEER on any other PROJECT or in connection with any other person or entity, unless disclosure or use thereof in connection with any matter other than services rendered to the OWNER hereunder is specifically authorized in writing by the OWNER in advance. This Section 11.6 shall survive the expiration of this Agreement.

11.7 SUBCONTRACT REQUIREMENTS

The ENGINEER shall include the terms and conditions of this Agreement in every subcontract or agreement with a consultant for this PROJECT so that these terms and conditions shall be binding upon each subcontractor or consultant. The subcontractor(s)/consultant(s) will maintain all licenses and certifications to practice its profession or trade by all public entities having jurisdiction over the PROJECT. The subcontractor(s)/consultant(s) further represent to the OWNER that the subcontractor(s)/consultant(s) will maintain all necessary licenses, certifications, permits or other authorizations necessary for the PROJECT until the remaining duties hereunder have been satisfied.

11.8 NOTICES

Unless otherwise provided, all notices shall be in writing and considered duly given if the original is hand delivered; if delivered by facsimile to 256-427-5325, or is sent by U.S. Mail, postage prepaid to City of Huntsville Engineering, P. O. Box 308 (35804), 320 Fountain Circle (35801), Huntsville, AL. All notices shall be given to the addresses set forth above. Notices, hand delivered or delivered by facsimile, shall be deemed given the next business day following the date of delivery. Notices given by U.S. Mail shall be deemed given as of the second business day following the date of posting.

11.9 FEDERAL IMMIGRATION LAW

By signing this Agreement, the contracting parties affirm, for the duration of the agreement, that they will not violate federal immigration law or knowingly employ, hire for employment or continue to employ an unauthorized alien within the State of Alabama. Furthermore, a contracting party found to be in violation of this provision shall be deemed in breach of the agreement and shall be responsible for all damages resulting therefrom.

11.10 STRICT COMPLIANCE

No failure of the OWNER to insist upon strict compliance by the ENGINEER with any provision of this Contract for Professional Services shall operate to release, waive, discharge, modify, change or affect any of the ENGINEER's obligations.

11.11 WAIVER

No provision of this Agreement may be waived except by written agreement of the parties. A waiver of any provision on one occasion shall not be deemed a waiver of that provision on any subsequent occasion, unless specifically stated in writing. A waiver of any provision shall not affect or alter the remaining provisions of this Agreement.

11.12 SEVERABILITY

If any provision of this Agreement, or the application thereof, is determined to be invalid or unenforceable, the remainder of that provision and all other provisions of this Agreement shall remain valid and enforceable.

11.13 ETHICS

The ENGINEER shall not offer or accept any bribes or kickbacks from or to any manufacturer, consultant, trade contractor, subcontractor, supplier or any other individual or entity in connection with the PROJECT. The ENGINEER shall not confer on any governmental, public or quasi-public official having any authority or influence over the PROJECT any payment, loan, subscription, advance, deposit of money, services or anything of more than nominal value, present or promised. The ENGINEER shall not, without the express written permission of the OWNER, engage or recommend to the OWNER engagement of any consultant, trade contractor, subcontractor, or supplier to provide services on behalf of the ENGINEER, OWNER or PROJECT in which the ENGINEER has a direct or indirect proprietary or other pecuniary interest; or call for the use of or by exclusion require or recommend the use of products, materials, equipment, systems, processes or procedures in which the ENGINEER or in which any consultant, trade contractor, subcontractor, or supplier of the ENGINEER has a direct or indirect proprietary or other pecuniary interest. Without prior notification and written approval of the OWNER, the ENGINEER and the ENGINEER'S sub-consultants shall not offer services to the OWNER'S contractor.

11.14 ENTIRE AGREEMENT

This Agreement represents the entire agreement between the OWNER and the ENGINEER and supersedes all prior communications, negotiations, representations or agreements, either written or oral. This agreement may be amended only by written instrument signed by both OWNER and ENGINEER.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement the day and year first above written.

ENGINEER:
AMEC FOSTER WHEELER ENVIRONMENT & INFRASTRUCTURE, INC.

BY: _____
Steve D. Stewart

TITLE: Senior Project Manager

ATTEST: _____

Given under my hand this_____day

Of _____, 2016.

_____
Notary Public

My commission expires_____

OWNER:
CITY OF HUNTSVILLE

BY: _____
Tommy Battle

TITLE: Mayor

ATTEST: _____

Given under my hand this_____day

Of _____, 2016.

_____
Notary Public

My commission expires_____

ATTACHMENT 1-SCOPE OF SERVICES

(Refer to letter dated April 22, 2016, from W. Byron Hinchey and Steve D. Stewart to Gary Gleason and attachments).

April 26, 2016

Mr. Gary Gleason, PE
City of Huntsville
Engineering Division
320 Fountain Circle
Huntsville, AL 35801

Dear Mr. Gleason

Re: Pedestrian Access and Redevelopment Corridor (PARC)
Pinhook Creek and Huntsville Spring Branch
Amec Foster Wheeler Proposal MOB-15-068 revised

Please find attached a proposal for the referenced project. The proposal includes a detailed scope of services, project schedule, list of deliverables, time and materials not-to-exceed fee estimate, and standard bill rate schedule. This proposal is valid for 90 days.

It is our understanding that the services proposed herein will be authorized under the City of Huntsville standard agreement for engineering services (Attachment 1).

Thank you for this opportunity to assist the City of Huntsville with this exciting project. If you have any questions please call me at 615-944-9012.

Sincerely,
Amec Foster Wheeler

W. Byron Hinchey, PE
Associate Project Manager
byron.hinchey@amecfw.com

Steve D. Stewart, PE
Office Manager
steve.stewart@amecfw.com

WBH:wbh

Proposal for
Pedestrian Access and Redevelopment Corridor (PARC) Design

Contents

SCOPE OF SERVICES

The Amec Foster Wheeler Team (Consultant) proposes the following scope of service to the City of Huntsville (Client) to perform professional services pertaining to the planning, design, and funding of infrastructure improvements along Pinhook Creek and Huntsville Spring Branch in downtown Huntsville. Roles of the principal team members are presented in Table 1.

Table 1.—Team Member Roles.

Firm	Primary Roles
Amec Foster Wheeler Environment & Infrastructure, Inc (Prime)	• Overall Project Management • Data Collection and Management • Field Surveying • Subsurface Investigations • Geotechnical Engineering • Hydrology and Hydraulics • Environmental Engineering and Permitting • Civil Engineering and Geo-Structural Design • Overall Design Plan Development
Rosales + Partners (Sub)	• Planning and Design of Pedestrian Sky Bridge
Urban Design Associates (Sub)	• Urban Planning • Project Master Plan • Community Outreach and Engagement
The Ferguson Group (Vendor)	• TIGER Grant Application • Benefit Cost Analysis • Grant Advocacy Services
Tri-State Drilling (Vendor)	• Subsurface Exploration
Ground Penetrating Radar Systems (Vendor)	• Utility location using ground penetrating radar technology, if and as needed

The project team was designated by Client, with the exception of the drilling and mapping vendors, to utilize local experience combined with national expertise to meet the technical and schedule demands of this specific project. The drilling and mapping vendors were selected by the Prime to serve specific roles in field data collection.

The project reach is generally described as the multimodal corridor from the twin railroad trestle upstream of Holmes Avenue (Project Begin) on Pinhook Creek to the downstream side of the Lowe Mill Property (Project End) along Huntsville Spring Branch, a distance of approximately 6,700 feet (Figure 1).

The concept for infrastructure improvements in this multimodal corridor include:

- Expansion of the Pinhook Creek and Huntsville Spring Branch stream channel to match generally the width and conveyance capacity of the bridge crossings at Holmes Avenue, Clinton Avenue, and Heart of Huntsville Drive.
- Installation of a retaining wall on the east bank of Pinhook Creek between Holmes Avenue and the Memorial Parkway.
- The replacement and expansion of the timber railroad bridge at the Fagan Creek confluence with a concrete railroad bridge.

- The installation of a new pedestrian crossing over Pinhook Creek, a new pedestrian crossing over Fagan Creek, and a new pedestrian crossing over Huntsville Spring Branch.
- The installation of greenway trails and related features along the stream corridor.
- The installation of a cable-supported pedestrian sky bridge (Figure 2).
- The relocation of stormwater and sanitary sewer infrastructure necessary to construct the channel improvements and park & trail features.

The Amec Foster Wheeler Team will prepare design plans and specifications using the following resources, guidelines, and assumptions:

- The design plans will identify utility conflicts and will address conflicts through callouts, standard details and notes for potential utility relocations. Detailed design for the relocation of utilities is proposed for stormwater and sanitary sewer features.
- ALDOT design details will be used where available. Where ALDOT design details are unavailable, City of Huntsville details will be used as a template and modified as necessary.
- Detailed construction cost estimates will be based on ALDOT unit prices where available (http://alletting.dot.state.al.us/Bidtabs/Bidtabs.htm). RSMeans Construction Cost Data, as adjusted for location, will be used to supplement ALDOT unit prices where needed. ALDOT item numbers and bid tab will be utilized.
- ALDOT specifications will be used where available. ALDOT specifications will be modified and/or supplemented as needed.

Plan development will generally follow the milestones specified in the contractual documents, which stipulate a pre-design meeting, 30% plans, 60% plans, 90% plans, and final (100%) plans.

Figure 1.—Project Reach.

Figure 2.—Pedestrian Sky Bridge Conceptual Location.

1. Project Planning and Management

1.1. Project Management and Coordination

Project Implementation Plan and Management

Successful implementation of federally funded projects necessitate a clear roadmap in advance of performing in order to meet the project schedule and budget. Consultant will develop as detailed project schedule and Implementation Plan with interim milestones to meet the project objective including submission of a TIGER Grant application in accordance with USDOT deadlines.

Consultant will provide project management and administration services including coordination of sub-consultant activities, monitoring of sub-consultants, coordinating with Client staff, implementation of quality control and quality assurance procedures, development of health and safety plans for field activities, preparing monthly invoices and progress reports, preparing and maintaining project schedule, and continuously monitoring and revising the Implementation Plan.

Weekly Meetings

In support of this effort, project team meetings will be required to ensure that all team members are continually informed of recent and ongoing project activities. To facilitate this awareness, Consultant will hold weekly meetings, as needed, by conference call with the project team for up to six months. Once meetings are complete, meeting notes will be drafted and distributed to project team members. To define effort, weekly meetings are anticipated for 26 weeks.

1.2. Kickoff Meeting

The Consultant will schedule a project kick-off meeting with City Staff at the onset of the project. The kickoff meeting will serve the purpose to make introductions to team members, establish communication protocols, and discuss project execution including tasks, roles and responsibilities, deliverables, and schedules.

1.3. Design Workshop and Initial Meetings

A design workshop will be conducted in conjunction with the kickoff meeting. Client and Consultant will convene in Huntsville for a three day workshop. The objective of the workshop is to accomplish the following:

- Detailed overview of the initial engineering and design elements;
- Explanation of constraints and opportunities;
- Review of adjacent property relationships;
- Discussion, review, and selection of preferred alignment of the pedestrian sky bridge;
- Discussion and assignment of required elements for the grant package; and
- Urban design considerations including functional requirements; character elements; public spaces; landscape; lighting; access; interface with development; uses; and pedestrian connectivity.

As a component of the workshop, a field reconnaissance of the entire project corridor will be conducted. Additionally, initial meetings with key stakeholders will be conducted including City leadership, Huntsville Housing Authority (HHA), and other stakeholders as needed.

For the kickoff meeting and workshop:

- Up to 2 Amec Foster Wheeler Staff will participate for the duration;
- One staff member from Urban Design Associates will participate for the duration.
- One staff member from Rosales + Partners will participate for two of the three days; and
- Up to 2 staff from The Ferguson Group will participate selectively by phone on an as-needed basis;

2. Data Collection

2.1. Project Web Site

Consultant will establish a project web site for the purpose of data storage, information sharing, and project collaboration.

2.2. Historical Data and Documents

Client will identify historical data and documents and provide to Consultant in digital form, as available, for the project reach. Historical information should include:

- previous engineering studies,
- environmental assessments/studies,
- design concepts/plans,
- subsurface data,
- geotechnical studies,
- field survey,
- demographic data,
- vehicular and pedestrian accident data in the project area, and
- as-built drawings of nearby facilities/existing roadway bridges to be crossed with the new pedestrian bridge.

2.3. Digital Data Collection

Consultant will collect the effective FEMA hydraulic models and associated DFIRM database. Additionally, Consultant will download publically available digital data from the Huntsville Data Depot.

Client will provide Consultant with any additional GIS data that may be useful for the project planning and design including, but not limited to, utility mapping for water, sewer, gas, and electric.

Consultant will prepare collected data for use in design plan development by converting data sets into useable layers for Microstation, which the Client requires for use in design plans.

2.4. Field Survey

Client will be responsible for providing permission to access all properties for field operations including, but not limited to, site visits, field survey, and sub-surface exploration and testing.

Prior to commencement of field survey activities, Client will prepare and deliver a letter on City letterhead explaining the need for field surveys of private properties and identifying a contact person within the City for residents to call with questions. Consultant field staff will carry copies of the letter and distribute to residents and businesses as needed.

Control Points

Client will provide Consultant with existing control points (benchmarks) in the project area. Consultant will select one or more of these control points and will establish horizontal and vertical control using a 4-hour OPUS.

Design Survey

Consultant will perform a location survey (design survey) as necessary to support the project design to include:

- Stormwater infrastructure including pipe locations, pipe dimensions, and invert elevations;
- Visible utility features; and
- Location of physical features in the project corridor that may be affected by construction including pavement (parking lots and roads), buildings, fencing, and other permanent features.

The extent of the field survey will be the anticipated corridor where physical improvements are anticipated on both the east and west banks of the stream(s) from project begin to project end encompassing approximately 65 acres (Figure 3).

The field survey is not anticipated for existing hydraulic structures (bridges) since this data is already available in existing hydraulic models and/or as-built drawings with one exception:

1. There is a small pedestrian crossing over Huntsville Spring Branch in the vicinity of Lowe Mill. A field survey will be performed on this structure since the structure will likely be replaced or expanded by the project.

Topographic Survey

For general design purposes, Consultant will collect and utilize digital 1' contour mapping previously generated for Client by Amec Foster Wheeler and based on State Office of Water Resources (OWR) 2010 aerial flight. Extra data points from the design survey may be used to supplement the contour mapping for better definition or accuracy.

Figure 3.—Proposed Area of Field Survey.

3. Geotechnical Investigation

The purpose of the geotechnical investigation will be to define the general subsurface conditions in the project area as well as site specific conditions (i.e. geologic setting, potential geologic hazards, potential bridge abutment/pier foundations, etc.) that could influence the design and construction of the proposed project features. Consultant will characterize the subsurface conditions in the project area and provide opinions and recommendations with regard to the geotechnical engineering aspects of the proposed construction.

3.1. Data Review

Consultant will review previous geotechnical work performed in the project area and develop a plan for additional subsurface exploration. Specifically, Consultant will:

- Collect and review previous geotechnical report, boring logs, and laboratory analyses prepared by the US Army Corps of Engineers (USACE) for the Pinhook Creek Section 205 flood control project proposed in the early 2000's.
- Prepare a detailed boring plan for additional subsurface exploration to obtain soil samples and rock coring for laboratory testing to supplement existing information collected and reviewed.
- Prepare a Health & Safety Plan for subsurface exploration.

3.2. Subsurface Data Collection and Analysis

This scope is based on drilling a total of 14 Standard Penetration Test (SPT) borings at the following locations:

New Pedestrian Bridge over Pinhook Creek	2 SPT borings
New Pedestrian Bridge over Fagan Creek	2 SPT borings
New Pedestrian Bridge over Huntsville Spring Branch	2 SPT borings
New Pedestrian Sky Bridge	8 SPT borings

Borings will extend to bedrock, which is assumed at a depth of 50 feet, to verify bedrock depth. Rock coring is proposed for an additional depth of 10 feet. Borings will be advanced to the exploration depths using power auger techniques, and the overburden will be drive-sampled using Standard Penetration Test (SPT) method and thin-wall sampling methods to obtain N-values and relatively undisturbed samples for laboratory testing. The sampling will be performed in general accordance with the appropriate ASTM method.

Upon completion, each boring will be checked for ground water and will then be backfilled with grout. A conventional, truck-mounted drill rig (provided by a drilling subcontractor) is proposed for the required exploration.

The proposed explorations will be located in the field by taping distances from existing site features and/or using hand held GPS units. Consultant will provide a representative on-site during the field portion of the work to coordinate and document the exploration activities, provide on-site sample review, and revise the exploratory plan, as necessary, to accommodate the actual conditions encountered.

In the laboratory, soil tests will be performed to determine the AASHTO soil classification and to determine the engineering characteristics of the soil profile. Anticipated laboratory testing includes:

30 Moisture Content tests

30 Sieve Analysis / Hydrometer tests

15 Atterberg Limits tests

6 Triaxial Shear tests

4 Consolidation tests

10 Compression tests on rock cores

Two-dimensional modeling and analyses will be performed for one proposed stream bank geometry for stability, seepage analysis, and rapid drawdown. Soil parameters used in the modeling will be obtained from the laboratory testing and from provided data.

3.3. Geotechnical Report

Upon completion of the field and laboratory work, the data will be analyzed to prepare a Geotechnical Report that will include, but not necessarily be limited to, the following:

- A general description of the site and subsurface conditions along the proposed alignment;
- A description of the local geology and potential geologic hazards;
- An individual log (8.5" x 11.0") for each boring;
- Geotechnical drawings (11" x 17") which depict the boring locations, locations of proposed flood control features, and our graphic interpretation of the subsurface profile;
- Development of seismic design parameters, including discussion of liquefaction potential, and a definition of the Site Class based on criteria presented in Seismic Site Class per 1615.1.1 of the 2006 Edition of the International Building Code (IBC);
- Comments regarding the geotechnical aspects of the proposed stream channel modifications, and our assessment as to the potential impacts to the adjacent bridge piers and foundations;
- Recommendations for design and construction of fill embankments and cut slopes;
- Discussion of soil properties as they relate to scour potential and requirements for erosion/scour protection or armoring;
- Recommendations for general design and construction criteria for shallow foundations, including an allowable soil bearing pressure, minimum footing widths, and a minimum depth of embedment, if feasible;
- Recommendations for general design and construction criteria for deep foundations including allowable compression and tension loads, and estimated embedment lengths (if required); and
- Recommendations for deep foundation installation, installation monitoring, and load testing (if required).

The following notes and limitations apply:

- Points of exploration will be adjusted in the field as necessary to accommodate a truck mounted drill rig, avoid the need for traffic control, and utility conflicts.

- Right-of-entry to the properties involved will be provided by the Client at no cost. It is expected the consultant team subcontract driller will have unrestricted access to needed points along the corridor of study and exploration.
- No federal or state guidelines or protocol were requested, and the report/deliverable will not be published in accordance with the standards for reports and drawings required of such agencies.
- The borings will be backfilled with grout, and any material not replaceable will be left on-site. The site will be left in a condition acceptable to the owner.
- It will be the responsibility of locators hired by Alabama-One-Call subscribers to identify and mark the location of any underground utility lines, pipelines or other structures that can be damaged by the exploration. Alabama-One-Call will be contacted prior to performing the fieldwork. Consultant will discuss the drilling activities with Client staff and local landowners, as appropriate and coordinate that information with Alabama-One-Call to help avoid damage to buried features. To minimize risk, we have included personnel cost in our fee proposal to work closely with Alabama-One-Call to identify buried infrastructure. Cost is included herein to hire a private buried utility locator for this project wherein full liability can be placed.
- As stated previously, the fee estimate includes the costs associated with locating the exploration points in the field. Available topographic information will be used to establish the ground surface elevations at the boring locations.
- Meeting the schedule for site exploration and the subsequent geotechnical report is dependent on the weather at the time the work is performed, the ability to gain access to the various properties involved and the actual subsurface conditions encountered. Adverse site or weather conditions may affect the drilling schedule.

4. Urban Planning

In order to develop consensus on the overall design and objectives with key stakeholders, Consultant will incorporate input as the team progresses through the design process. The approach outlined in this Task is intended to seek stakeholder input and incorporate stakeholder comments, where applicable, without delaying critical path items.

4.1. Project Concept Plans

There will be several levels of mapping generated for the project that illustrate the importance of the project and its connectivity to other local and citywide amenities. The maps for the project would be developed as a unified system for the team in this Task. These will also serve as good communication tools for the grant application and stakeholder understanding of the approach. In order to create a coherent framework plan for the project area both north and south of the Parkway, the urban design features will be tested and illustrated at three primary scales:

Citywide Scale - 1:800 scale

For the big picture rationale, we will need to understand and communicate the citywide impact of this effort. The approach will focus on the connectivity of this project to the citywide park and trail system with emphasis on connecting low-income areas and creating ladders of opportunity. This will be important for selling the importance of project to neighborhoods and elected officials.

Some of this was illustrated in the 2012 grant application. This includes:

- Proposed and existing greenway connectivity;
- Proposed and existing bikeways;
- Neighborhood and downtown pedestrian networks – existing and proposed;
- Building uses;
- Parks and Open Space; and
- Street and Highway Networks.

Project Scale - 1:200 scale

For the project area, a more refined "district" mapping will be required to understand the northern and southern proposal as a unified effort that affects adjacent properties and surrounding neighborhoods.

- Parcels;
- Existing land Uses;
- Proposed land uses;
- Streets and highways;
- Building Footprints;
- Parking and Service Areas;
- Parks;
- Topography and Natural Features; and
- Floodway and Flood Plain demarcation.

Design Scale - 1:20 scale

- Detailed existing conditions drawings along the channel and adjacent properties;
- Requirements for channel modification for flood mitigation;
- Detailed highway and street documentation;
- Existing topography; property lines; utility corridors; buildings, parking areas; wetlands; floodway; Rights-of-way and easements; and
- Existing and proposed channel sections with adjacent property.

Urban design concepts were vetted for the northern section of the project from the Norfolk Southern twin trestle downstream to Memorial Parkway during the work by the US Army Corps of Engineers in the early 2000s. However, these concepts have not been vetted for the southern section of the project from Memorial Parkway downstream to Lowe Mill. Therefore, in a staggered process, Consultant will focus on new design concepts for the southern section after refining previously proposed concepts for the northern section.

4.2. Refined Urban Design Concept Plan

Based on the feedback from the design workshop and site reconnaissance, Consultant will prepare specific recommendations for the architecture and aesthetics of public space and trail components. Design drawings and concepts will be prepared for review by the team in a 1-

day working session with the project team and a 1-day working session with the Huntsville Housing Authority (HHA) focused on the neighborhood plan and integration of the pathway and channel improvements on HHA property.

Drawings would include:

- 1"= 100' Site Design Plans – north and south;
- 1"=10' Typical Sections through Channel conditions – north and south;
- Key Character Elements: lighting; pathway design; landscape concepts/palette;
- Hardscape and site furnishing character;
- Key location perspectives/renderings; and
- 3D modeling of proposed pedestrian walkway connections.

4.3. Refinement of Preferred Plan Components

Consultant will modify the options and concepts following the team review in Task 4.2. A single working session will be conducted to review the design elements with City leadership, City staff, and key stakeholders as needed. Consultant will collect feedback and document modifications in a single revision plan.

4.4. Conceptual Design Development Package – Public Space Design

Consultant will consolidate comments from the design workshop and working session in Task 4.3 to produce one complete set of edits. Consultant will issue a Master Plan Summary Report with the key design elements to serve as the basis for detailed plan development, related site engineering development and costing.

The civil and structural engineering design team will work with the urban planners to coordinate the landscape and public space components into the overall design plan set. This may be broken out into two phases of work for the grant application; the northern section and the southern section.

A working session will be held with Consultant Team Members and the City project team to review the Schematic Design package. This package will include:

- Illustrative Plan for Northern and Southern Sections – 1"=100' Overall scale and 1"=50' detail plans for each section
- Key Cross Sections along corridor – (up to 8 sections)
- Focus Area Plans (landings, park spaces, etc.) 1"=20' scale – anticipate 4 areas
- Key Details - 1"=10'
  - Trails and walkways
  - Lighting
  - Site walls
  - Terraces and Hardscape
  - Signage
  - Ramps and Stairs
- Planting Palette/Planting Plan
- Perspective Renderings

4.5. Presentations

Consultant Team will prepare and deliver a final presentation of the proposed design package to the public/leadership.

5. Hydrology & Hydraulics

The hydrologic model to be used as a baseline model for the hydrologic analyses will be the HEC-1 model recognized by the State of Alabama as the model which supports the Madison County Map Modernization program. Likewise, the baseline hydraulic model will be the HEC-RAS model recognized by the State of Alabama as the model which supports the Madison County Map Modernization program.

5.1. Hydrologic Modeling

The baseline hydrologic model will be used for pre-project condition discharges for the project reach. The hydrologic model will be updated to represent post-project conditions based on channel modification, which will potentially affect hydrograph routing parameters. No other parameters are proposed for revision. Consultant will run the hydrologic model for the 10-yr, 25-yr, 50-yr, 100-yr, and 500-yr rainfall frequencies and document runoff peak at points of interest along the project reach for the pre- and post-project conditions.

FEMA recommends that stream discharge reported in the effective FIS not be changed due to a proposed project unless the change exceeds a 10% increase or decrease. The hydrologic analysis discussed herein is proposed in order to verify that the post-project discharge meets this tolerance.

5.2. Hydraulic Modeling

The baseline hydraulic model will be updated to represent existing physical conditions in the project reach. This step is anticipated due to recent work in the stream corridor that may not be reflected in the baseline model including the removal of buildings in the floodplain, construction of buildings in the floodplain, and the expansion of bridges at Holmes Avenue and Clinton Avenue. Water surface elevations will be documented along the project reach for the 10-, 25-, 50-, 100-, and 500-yr frequency events. A floodway analysis for the project reach will be performed for the pre-project conditions.

The hydraulic model will be modified through the development of the project concept as a design tool to guide the final project layout. Interim model runs will be limited to the 10-, and 100-yr frequency events. A floodway analysis will not be determined for interim model runs.

A post-project conditions model will be created based on the final project layout. Water surface elevations will be documented along the project reach for the 10-, 25-, 50-, 100-, and 500-yr frequency events. A floodway analysis for the project reach will be performed for the post-project conditions.

The limits for the hydraulic modeling will be determined in general compliance with FEMA procedures for Conditional Letters of Map Revision (CLOMR). The hydraulic model will begin at FEMA cross section I on Huntsville Spring Branch and continue upstream until the post conditions model ties into the effective Flood Insurance Study (FIS) information within permissible tolerances for floodplain elevations and floodway widths.

5.3. Floodplain and Floodway Mapping

Consultant will create digital floodplains for the 100-yr and 500-yr events and the floodway based on the final pre-project conditions and the final post-project conditions hydraulic models. The limits of the mapping will be confined to the following stream reaches:

- Pinhook Creek from its confluence with Fagan Creek (FEMA cross section A) upstream to the limit of hydraulic modeling discussed previously.
- Huntsville Spring Branch from the confluence with Fagan Creek downstream to the first FEMA cross section south of the project reach (FEMA cross section I).

The floodplain mapping will be generated using automated mapping techniques and will be based on the best available digital contour mapping as provided by the Client.

The automated floodplain mapping will be checked for reasonableness but will not be modified except for the following cases:

- Mapping anomalies that are identifiable at FIS scale (1"=500') in the opinion of the GIS mapping staff will be manually smoothed.
- Islands in the floodplain that are smaller than approximately 10,000 square feet will be deleted.

5.4. Hydraulic Report

A brief Hydraulic Report will be prepared to present final project layout, design discharges, and hydraulic model results. Final hydrologic and hydraulic models and associated GIS data created for the project will be provided as digital attachments to the report.

A draft copy of the report will be provided for review and comment. Upon addressing comments, a final report will be prepared. This report will be prepared so as to serve as the basis for a FEMA Conditional Letter of Map Revision (CLOMR). However, preparation of a CLOMR is not included in this scope of services.

6. Environmental Compliance and Permits

6.1. Limited Environmental Assessment

Since this project will utilize federal funding, Consultant will evaluate the potential environmental impacts of project alternatives as required by the National Environmental Policy Act (NEPA) and update the existing limited Environmental Assessment (EA).

An EA was prepared for the same general project area by the USACE Nashville District in 2003. Consultant will examine the 2003 EA and perform a literature review, desktop review, and site visit to document conditions that have changed since the 2003 EA was produced. Consultant will update the information in the 2003 EA to reflect current field conditions and will expand the coverage of the EA geographically, if necessary, to include the additional project areas. It is assumed that an Environmental Impact Statement (EIS) will not be required.

In general the efforts will include, but not be limited to, evaluation of:

1. Potential impacts to wetlands
2. Threatened and endangered species
3. Water quality
4. Hazardous materials
5. Cultural Resources
6. Environmental Justice

These efforts will focus on updating the previous Finding of No Significant Impact (FONSI) to include the current project extent and design features. A draft EA will be developed and coordinated with the appropriate local, state, and federal agencies.

6.2. Permit Applications

It is assumed that project coordination and potential permitting will be necessary with

- USACE/ADEM (404 and 401);
- TVA; and
- ALDOT.

Due to the anticipated construction of retaining walls and bridges and the removal of concrete from the existing channel, a USACE permit is expected. Consultant will contact USACE to coordinate and conduct a site visit with permitting staff. It is anticipated that the site visit will serve as a pre-application review meeting. Consultant will prepare a 404 permit application, as applicable, based on the final design. The scope for the effort will include review of the required permit documents and the preparation of permit application materials. An allowance is made for agency review and comment and the potential request for additional information. It is assumed that the project can be performed under one or more nationwide general permits.

Consultant will contact TVA to discuss potential permitting needs. It is not expected that a site visit with TVA will be necessary. Consultant will prepare a TVA permit application, as applicable, based on the final design. The scope for the effort will include review of the required permit documents and the preparation of permit application materials. An allowance is made for agency review and comment and the potential request for additional information.

Coordination and permitting with ALDOT will be required due to the pedestrian sky bridge crossing of Memorial Parkway and Governor's Drive. Based on discussions thus far, it is understood that Client will coordinate with ALDOT and will prepare permit applications. Consultant will provide materials and documentation to Client for use in permit preparation.

For the purpose of pricing, it is assumed that none of the permits discussed above will require Consultant to attend public meetings or respond to public comments.

7. Real Estate Services

7.1. Real Estate Acquisition

Consultant will identify parcels to be purchased and parcels which will require easement acquisition or right-of-way purchase.

Consultant has preliminarily identified 25 parcels that border the project (Figure 4) and are not owned by the Client. Consultant will research real estate records for up to 25 parcels that may be impacted by the proposed project and document ownership. For these parcels, Consultant will perform boundary surveys in preparation for real estate acquisition and will prepare property acquisition maps with legal descriptions.

Consultant has preliminarily identified 2 parcels that border the project (Figure 5) where Client has already purchased a portion of the parcels. For these parcels, Client will provide legal descriptions to Consultant for the parcels purchased by the City in lieu of the Consultant performing boundary surveys.

Consultant has preliminarily identified 1 parcel that borders the project (Figure 6) where it is anticipated that Client will acquire the entire parcel in order to construct the project. For this parcel, it is assumed that no boundary survey will be required.

Figure 4.—Proposed Boundary Surveys.

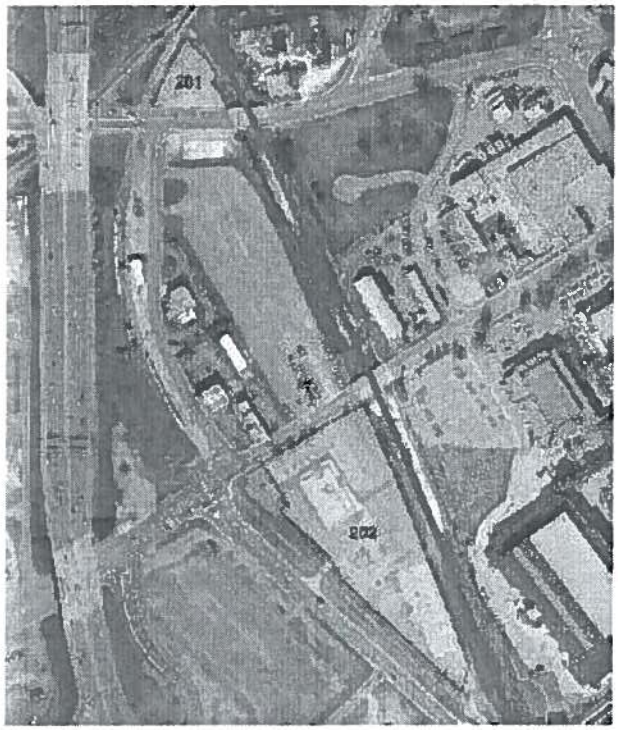


Figure 5.—Boundary Information Needed from Client.

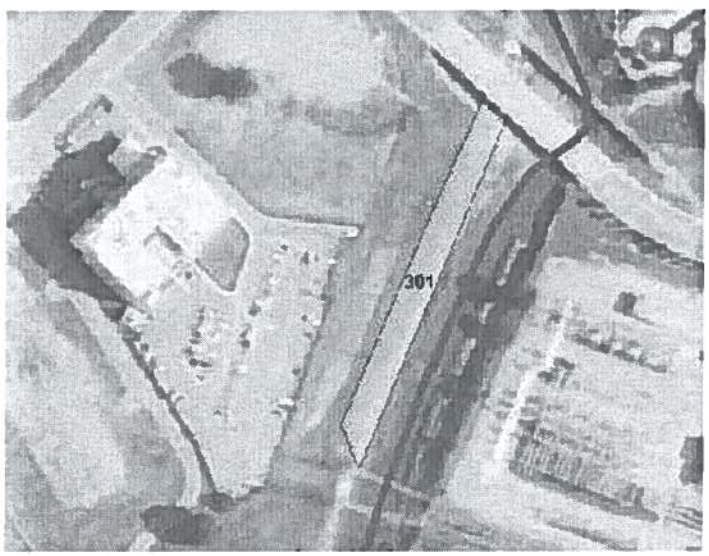


Figure 6.—Boundary Information Not Required.

7.2. Real Estate Appraisals

A number of property and easement acquisitions will be required to construct the proposed project. Client will perform necessary property appraisals. Consultant will consult with Client to identify properties and share information through the appraisal process.

7.3. Phase I Environmental Site Assessments

Several parcels will have to be purchased within the project area which will necessitate environmental due diligence in order to qualify for the innocent landowner defense under CERCLA (Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C.A. Section 9601 et. seq.).

Environmental Site Assessments (ESA) will be conducted in general accordance with ASTM E1527-13, Standard Practice for Environmental Site Assessments: Phase 1 Environmental Site Assessment Process. The purpose of the ESA is to identify "recognized environmental conditions" using all appropriate inquiry, through observations of property conditions, review of readily available regulatory information, and interviews with individuals who have knowledge regarding the site and surrounding area. Consultant inquiries are directed toward identifying the presence, or likely presence, of hazardous substances and petroleum on the property under conditions which would indicate an existing release, a past release, or a material threat of a release, of such hazardous substances or petroleum into the soils, groundwater or surface water of the property.

Evaluation or discussion of radon, lead paint, mold, indoor air quality, vapor intrusion, and wetland issues is not included in the scope of the ESA. Visual observations of potential asbestos-containing material (PACM) will be included if PACM is encountered during the site visit. The scope does not constitute a formal asbestos survey, however, Client will be notified if Consultant observes conditions warranting further investigation or PACM sampling.

The Phase I ESA Report will be prepared using readily available information and Consultant will make a reasonable effort, consistent with the time available and the responsiveness of third parties, to obtain government records and interview knowledgeable persons.

For the purpose of this proposal, we assume that Phase II ESAs will not be required for any of the parcels.

Literature Review

Consultant will gather and review information from readily available sources, including maps, government files, and environmental reports that may help identify recognized environmental conditions related to the property, including, but not limited to:

- Historic uses of the property;
- Current practices and uses;
- Current and, if readily available, historic uses of adjacent lands which may impact the property;
- Facilities and property features;
- Aerial photographs; and
- Geologic and hydrologic features of the property and general vicinity.

It is assumed that Client will provide relevant information on properties that may be available with municipal files such as previous ESAs.

Consultant will enhance the literature review by searching available state and federal databases to identify relevant information regarding the properties and within the ASTM specified search radii. The databases typically include lists of permitted facilities or sites subject to enforcement and investigation activities by environmental agencies, including, but not limited to:

- Federal NPL site list
- Federal Delisted NPL site list
- Federal CERCLIS list
- Federal CERCLIS NFRAP site list
- Federal RCRA CORRACTS facilities list
- Federal RCRA non-CORRACTS TSO facilities list
- Federal RCRA generators list
- Federal institutional control engineering control registries
- Federal ERNS list
- State lists of hazardous waste sites identified for investigation or remediation
- State equivalent NPL
- State equivalent CERCLIS
- State landfill and/or solid waste disposal site lists
- State leaking storage tank lists
- State registered storage tank lists
- State institutional control engineering control registries
- State voluntary cleanup sites
- State Brownfield sites

Site Reconnaissance

Consultant will conduct a site visit to visually observe property features, including the interior and exterior of on-site facilities for indications of recognized environmental conditions and will conduct a "windshield" survey of land uses adjacent to, and in the vicinity of, the properties. For efficiency, it is assumed that this site visit will correspond with the site visit discussed in Task 6.1.

Interviews

To the extent practical, Consultant will contact property owners and any person familiar with the facility operations regarding information about properties. If government file information indicates significant regulatory agency involvement with the property, Consultant will attempt to contact agency personnel. Interviews will be completed in accordance with the current ASTM 1527-13 standard.

Report

The information gathered from the literature review, site reconnaissance, and interviews will be evaluated by a qualified environmental professional. A draft Phase I Environmental Site

Assessment report will be prepared for the properties proposed for acquisition. It is assumed that up to 25 parcels will be included in one report and the services herein can be performed concurrently for all properties. Upon Client review and comment, a final report will be produced.

8. Engineering Design Plans (General Civil)

Engineering plan development will follow the milestones specified in the contractual documents, which stipulate a pre-design meeting, 30% plans, 60% plans, 90% plans, and final (100%) plans. The significant design elements to be included in the design plans include:

- Channel improvement along the west bank of the stream channel from the twin railroad trestle (Project Begin) to Memorial Parkway (Figure 1). A decision to include channel improvement along the stream channel from Governors Drive to Lowe Mill (Project End) will be made during project execution.
- Stream Restoration and Enhancement including:
    - Develop a low-flow channel geometry and dimension compatible with watershed conditions, to the greatest extent practical while meeting other project objectives and physical constraints.
    - Incorporate a living native shoreline for a natural aesthetic and bank stability at selected locations.
    - Place fluvial rockscapes at selected locations along the channel banks and mid-channel, patterned after natural channel geomorphology for energy dissipation, bank stability, and aesthetics.
    - Plan locations of vegetated lateral bars to sustain gentle meanders.
    - Recognize natural locations for the development of unvegetated point bars and incorporate this into the design (e.g. one currently exists at the bend at Heart of Huntsville Drive).
    - Explore potential application of riffle-pool sequences or rocky shoals across the channel to add a natural aesthetic and to dissipate erosive energy.
- A retaining wall along the east bank of the stream channel from Holmes Avenue to Memorial Parkway.
- A new railroad bridge at the Fagan Creek confluence with Pinhook Creek to replace the existing timber bridge.
- Pedestrian trails at-grade and/or in-channel in select areas (Figure 7). Approximately 3200 feet of trails are proposed along the west bank of the stream and 4200 feet along the east bank.
- Three new pedestrian crossings to connect pedestrian trails over Pinhook Creek, over Fagan Creek, and over Huntsville Spring Branch (Figure 8).
- A new cable-supported pedestrian sky bridge (Figure 2) with an intermediate access ramp.
- Relocation and/or adjustment of stormwater infrastructure necessary to accommodate project features, primarily channel improvement. Based on a cursory review of data provided by Client, the limit of potential stormwater relocations is presented in Figure 9. The potential relocations include up to 5600 feet of storm sewers. However, it is unlikely that all of these lines will require relocation upon final project design

- Relocation and/or adjustment of sanitary sewer infrastructure necessary to accommodate project features. Based on a cursory review of data provided by Client, the limit of potential sanitary sewer relocations is presented in Figure 10. The potential relocations include up to 7300 feet of sanitary sewers. However, it is unlikely that all of these sanitary sewer lines will require relocation upon final project design.

It is anticipated that one comprehensive set of design plans will be developed for the project. However, design plan development of the major project components are discussed separately:

- General civil design including channel improvements is discussed in Task 8.
- Design of the pedestrian sky bridge is discussed in Task 9.
- Design of three pedestrian crossings over streams is discussed in Task 10.
- Design of the replacement bridge for the railroad crossing over Huntsville Spring Branch is discussed in Task 11.

For the purpose of scope development and pricing, electrical engineering and associated lighting for project features is not included. Additionally, the total number of design plan sheets is estimated at 180 which is distributed as follows:

General Civil	45 plan sheets
Pedestrian Sky Bridge	90 plan sheets
3 Pedestrian Crossings	24 plan sheets
Railroad Crossing	21 plan sheets

8.1. Pre-Design Meeting and Site Visit

Consultant will meet with Client at a pre-design meeting to discuss the project concept and individual design components. A site visit is expected as part of the pre-design meeting. The purpose of the meeting will be to review and discuss:

- the proposed project features
- the proposed project schedule;
- site constraints, site specific objectives, and Client preferences; and
- digital data, reports, design standards and details, and other project specific information that is needed or would be beneficial.

It is anticipated that the pre-design meeting will be integrated into the design workshop discussed in Task 1.3. However, effort is included in this task for preparatory work to prepare for the design workshop and site visit. Additional effort is included for staff that are not included in the design workshop to make a separate site visit.

Discussions at the pre-design meeting will include:

- Design standards and guidelines,
- Foreseen design challenges;
- Plan requirements,
- Coordination with utilities,
- Environmental permitting,

- Compliance with local ordinances, and
- Special conditions.

8.2. Conceptual Design (30%) Plans

Conceptual design plans, considered 30% complete, will be prepared and submitted to Client for review and comment. It is anticipated that ALDOT design details will be used in the design plans except where City of Huntsville details are available, preferred, and provided by Client.

Consultant will meet with Client for a 30% design review meeting to discuss the preliminary design, design options/alternatives, and preliminary project budget.

8.3. Preliminary Design (60%) Plans

Preliminary design plans, considered 60% complete, will be prepared and submitted to Client for review and comment. With the preliminary design plans, Consultant will also prepare and submit:

- a brief summary of the resolutions to comments made on the 30% plans,
- an updated construction cost estimate,
- geotechnical report;
- hydraulic design report; and
- Phase I Environmental Site Assessments.

Consultant will meet with Client for a 60% design review meeting.

8.4. Complete Design Plans for Final Review (90%)

Substantially complete design plans, considered 90% complete, will be prepared and submitted to Client for final review and comment. With the 90% design plans, Consultant will also prepare and submit:

- a brief summary of the resolutions to comments made on the 60% plans,
- a list of quantities,
- a final construction cost estimate,
- a Notice of Intent (NOI) for coverage under the state general construction permit, and
- a Construction Best Management Practices Plan (CBMPP).

Consultant will meet with Client for a 90% design review meeting.

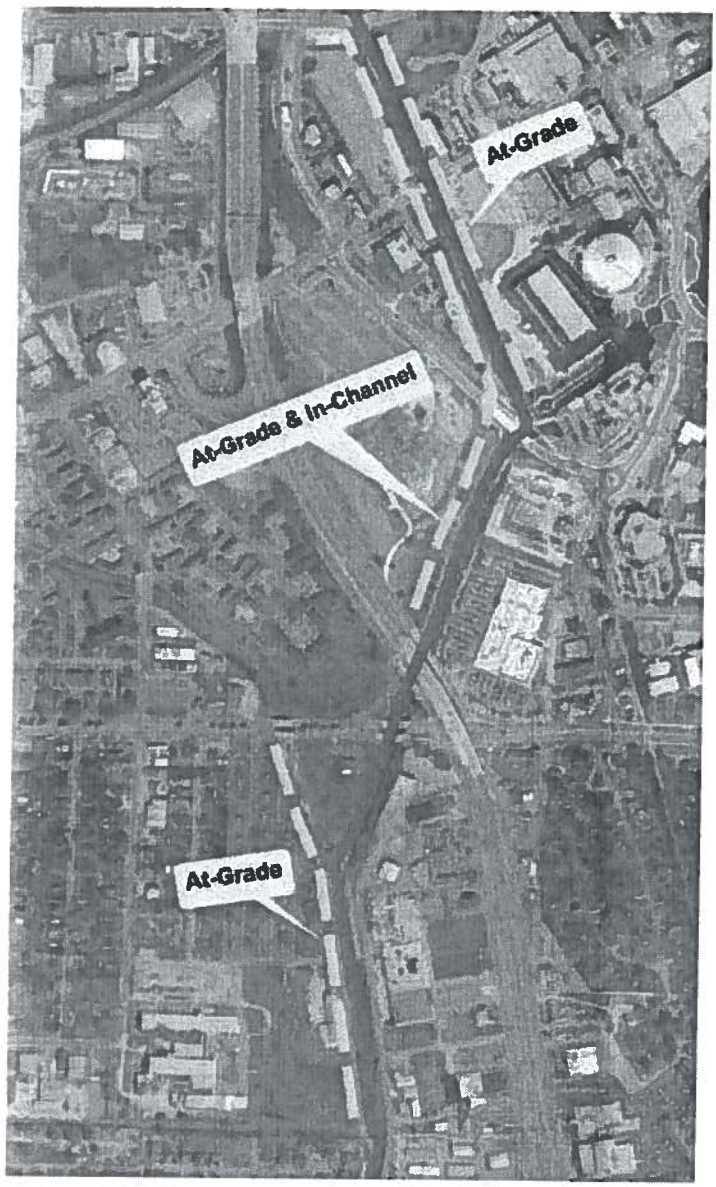


Figure 7.—Extent of Proposed Pedestrian Trails.

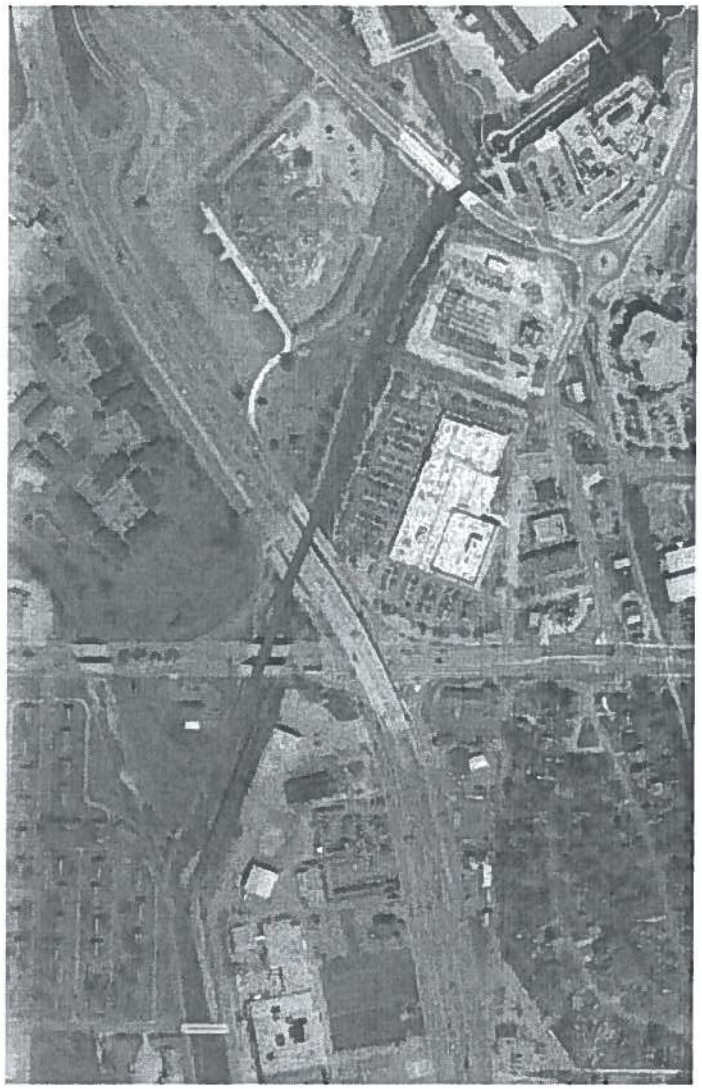


Figure 8.—Proposed Pedestrian Bridges.

Figure 9.—Potential Storm Sewer Line Relocations.

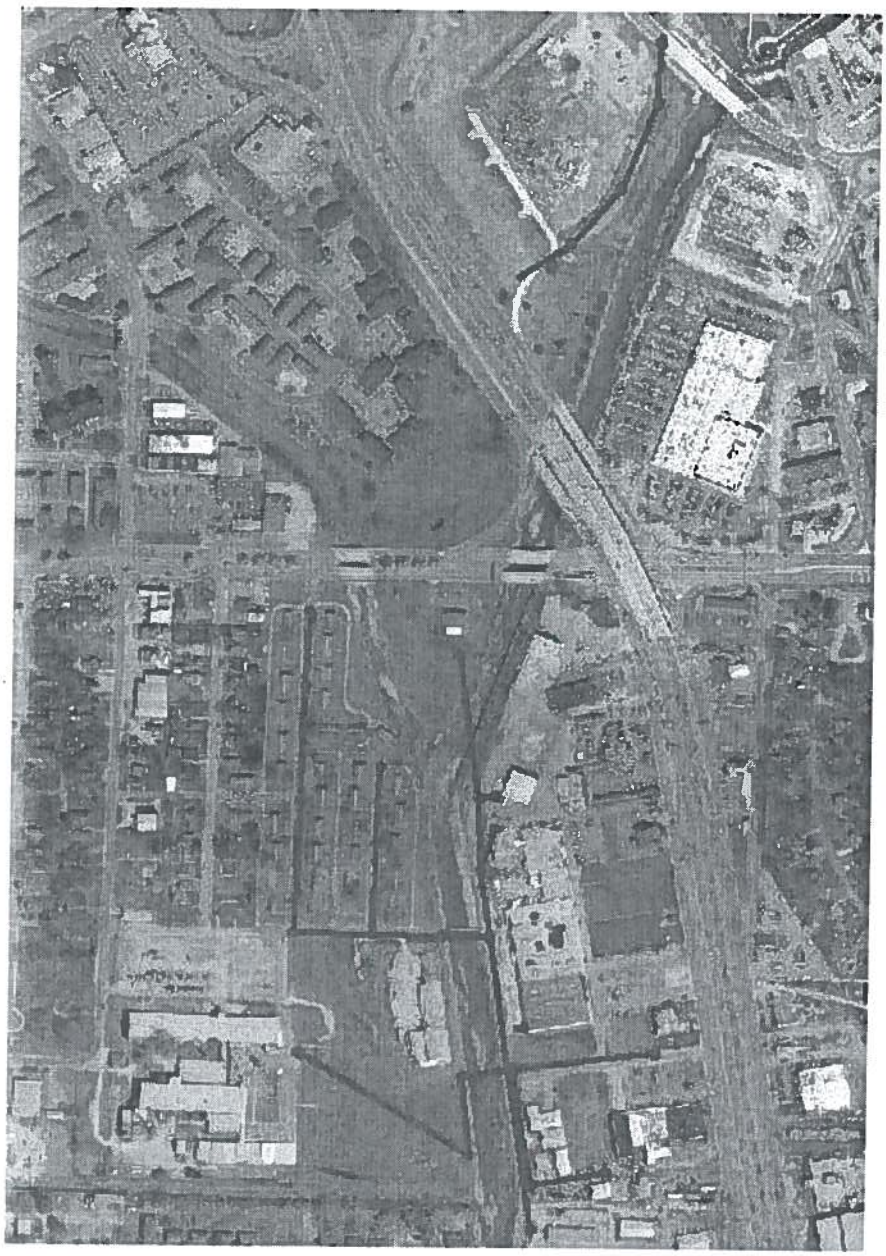


Figure 10.—Potential Sanitary Sewer Line Relocations.

8.5. Complete Design Plans for Advertisement (100%).

Final, 100% complete, design plans ready for advertisement will be prepared and submitted. With this submittal, Consultant will prepare and submit:

- a brief summary of the resolutions to comments made on the 90% plans;
- a final list of quantities in MS Excel format;
- a final construction cost estimate in MS Excel format;
- two (2) printed sets of construction drawings (24" x 36");
- a digital copy of the construction drawings in PDF format;
- a digital copy of the construction drawings in Microstation format; and
- two (2) printed sets of construction specifications.

A design review meeting is not anticipated at this design stage.

9. Structural Design (Pedestrian Sky Bridge)

A new cable-supported pedestrian sky bridge will span Memorial Parkway and Governors Drive and will connect pedestrians west of Memorial Parkway to the downtown area. The proposed corridor for the bridge is approximately 1730 feet long (Figure 2). It is anticipated that the elevated, cable-supported bridge will be approximately 930 linear feet and will span Memorial Parkway and Governors Drive. Ramps to access the elevated bridge will be compliant with the American with Disabilities Act (ADA) and may be 400 linear feet or more to achieve longitudinal slope conducive to pedestrians, bikes, and handicapped citizens. The ramps will be built on fill, to the extent permissible by the site topography and features to minimize construction cost. It is anticipated that masts for the elevated bridge spans will be positioned in order to avoid road right-of-ways.

While discussed separately, the pedestrian sky bridge will be integrated with other project features and presented in a comprehensive design plan set as discussed in Task 8.

9.1. Preliminary Design Phase – 30% Design

Project Meeting

Consultant Team members assigned to the structural design will attend the kick-off meeting and the design workshop discussed in Task 1 and one additional design team meeting with Client and the project team.

Data Review and Site Visit

Data collected in Task 2 will be reviewed in preparation for a site visit to review existing conditions and identify constraints that may affect the proposed design in conjunction with the kick off meeting.

Survey/Mapping

Bridge designers will provide input and coordinate with surveyors. Activities under this task include, but are not limited to:

- Provide recommendations for locations and extent of ground penetrating radar (GPR) services; and
- Prepare a Right-of-Way Requirement Report.

Utility and Agency Coordination

Consultant will coordinate the identification of high risk utility impacts and encroachments into the road right-of-way, if needed, and prepare a summary report.

Public Outreach

Consultant will attend and provide support to Client in public outreach and community meetings to obtain input on the proposed pedestrian bridge design including development of meeting materials such as graphics, presentation slides, handouts, drawings, graphic boards, etc. for each meeting, as appropriate. Consultant will conduct a pre-meeting planning session with Client via teleconference before each meeting to review meeting materials. One Community Meeting is anticipated toward the end of the preliminary design phase.

Workshop Preferred Alignment and Bridge Type

Consultant will prepare two bridge conceptual designs including a general layout, alignment, 3D sketches, and drawings of two options and conduct preliminary analysis on appropriate bridge structural types.

Consultant will develop a Bridge Type Selection Report in accordance to Client and/or ALDOT requirements including a Bridge General Plan, Bridge Site Data Submittal, Foundation Plan, Construction Cost Estimate and Type Selection Memo.

Preliminary Cost Estimates

Consultant will prepare a preliminary construction cost estimate for the project.

Outline Special Provisions

Consultant will prepare an outline of the special provisions, which shall be developed in subsequent final design tasks.

Design Memorandum

Consultant will prepare a brief design memorandum including preliminary drawings, cost estimates, refinements to reduce cost, optional design enhancements with costs and benefits, and results of bridge type selection analysis.

9.2. Final Design Phase – 60% Design

Consultant will complete the 60% plans, specifications, and estimate (PS&E) design for the project. The goal of this phase shall be to strive to limit construction cost.

Project Meetings

Consultant will attend up to four (4) in-person project development team meetings and up to fourteen (14) progress (conference calls) and coordination meetings with Client.

Field Survey

Consultant will utilize a private utility locate vendor for up to two days, if needed, to more accurately locate utilities for the final bridge design.

Utility and Agency Coordination

Consultant will coordinate with affected utility companies to assist them in developing relocation plans (to be prepared by the individual facility owners) and permits/agreements as needed.

Architectural Bridge Design

Consultant will develop architectural design up to 60% completion and ensure that the 60% bridge design is consistent with the design developed in Phase 1. Anticipated architectural design drawings include but are not limited to:

- Architectural/ Site Plan;
- Bridge and Approaches, Sections, Plan and Profile;
- Approach Bridge Structures Plans, Sections and Elevations;
- Architectural 3D Renderings;
- Lighting Plan and Details;
- Fence and Railing;
- Traveled Way and Mode Separation;
- Surface Treatments and Amenities;
- Trail signage, details and plans; and
- Project specifications, special provisions and estimates.

Civil Design

Consultant will develop civil improvement design up to 60% completion. Anticipated civil design drawings include, but are not limited to:

- Bridge, Road and Trail Alignment Plans;
- Demolition and Grading Plans;
- Profiles and Civil Details;
- Typical Sections;
- Right-of-Way Plans;
- Utility Plans and Profiles;
- Drainage Plans;
- Stage Construction Drawings and Traffic Management Plans;
- Construction Area Signage;
- Road and Trail Signage and Pavement Marking Plans;
- Lighting and Electrical Drawings; and
- Project specifications, special provisions and estimates.

Structural Design

Upon City's approval of Bridge Type Selection, Consultant will conduct a structural analysis and prepare 60% structural drawings. Anticipated structural design drawings include but are not limited to:

- General Plan;
- Structure Plan;

- Deck Contours;
- Foundation Plan;
- Construction Sequence;
- Abutment Layout and Details;
- Retaining Wall Layout and Details;
- Bent Layout and Details;
- Typical Sections;
- Girder Layout and Details;
- Approach Ramp Details;
- Log of Test Borings; and
- Project specifications, special provisions and estimates.

The work will be performed in accordance with ALDOT bridge practices, bridge design codes, and manuals.

Project Specifications and Special Provisions

Consultant will prepare technical specifications and special provisions for bid items including bid alternates. Documents will be developed in accordance with federal, state and local requirements in subsequent final design tasks. General conditions will follow the City and ALDOT requirements.

Cost Estimate

Consultant will prepare an estimate of probable construction cost for the 60% design using professional experience as a bridge of this type has not been previously constructed in the local marketplace. Estimate will include construction costs that reflect current market conditions, the bid items, utility relocation costs, environmental mitigation costs, contingencies and construction administration costs.

60% PS&E Submittal

Consultant will submit the 60% PS&E package for City review, including:

- Full Size 60% Plans (24x36) – five (5) hard copy sets and digital file (PDF)
- Special Provision and Technical Specifications – digital file (PDF)
- Structural Design Calculations – digital file (PDF)
- Quantities and Cost Estimate – digital file (PDF)

9.3. Final PS&E – 90% and 100% Design

Project Meetings

Consultant will attend up to three (3) in-person Project Development Team meetings with Client, and up to ten (10) progress (conference calls) and coordination meetings.

Landscape Plans

Consultant will develop landscape plans in accordance with the landscape concept approved in Phase 1. Landscape items include, but are not limited to:

- Signage, planting and irrigation plans for landings, plazas, and approach areas; and
- Planting and irrigation plans for bio-swales and similar storm water management techniques as needed.

Lighting Plans

Consultant will develop lighting design in accordance with the lighting concept approved in Phase 1. Lighting items include, but are not limited to:

- lighting plans,
- elevations,
- fixture schedules,
- luminaire cut sheets,
- control plans,
- mounting details, and
- specifications for conceptual lighting plan.

Photometric calculations will be provided for both functional and aesthetic lighting of the bridge. It is anticipated that planning and design necessary to bring electricity to the bridge will be performed by Huntsville Utilities and/or a third party.

Architectural Plans

Upon approval of the 60% architectural design, Consultant will develop architectural plans to 90% completion. Upon review and comment by Client, Consultant will incorporate comments and prepare final (100%) architectural plans.

Civil Plans

Upon approval of the 60% civil design, Consultant will develop civil plans to 90% completion. Upon review and comment by Client, Consultant will incorporate comments and prepare final (100%) civil plans.

Structural Plans

Upon approval of the 60% structural design, Consultant will develop structural plans to 90% completion. Upon review and comment by Client, Consultant will incorporate comments and prepare final (100%) structural plans.

Project Specifications and Special Provisions

Upon approval of the 60% Special Provisions and Technical Specifications, Consultant will develop Special Provisions and Technical Specifications to 90% completion. Upon review and comment by Client, Consultant will incorporate comments and prepare final (100%) Special Provisions and Technical Specifications.

Cost Estimate

Upon approval of the 60% cost estimate, Consultant will develop the 90% and 100% cost estimates. Consultant will incorporate Client comments to finalize the cost estimate and include supporting data for Client to use in administering construction.

90% PS&E Submittals

Consultant will prepare a 90% PS&E submittal to include plans in required format, special provisions, technical specifications, and the engineer's estimate as follows:

- Full Size 90% Plans (24x36) – five (5) sets and digital file (PDF)
- General and Special Provisions, technical specifications – digital file (PDF)
- Bid Quantities and Cost Estimate – digital file (PDF)

100% (Final) PS&E Submittal

Consultant will prepare a 100% (Final) PS&E submittal to include plans in required format, stamped calculations, special provisions and the engineer's estimate as follows:

- Full Size Final Plans (24x36) – five (5) hard copy sets and digital file (PDF)
- General and Special Provisions, technical specifications – digital file (PDF)
- Stamped Structural Design Calculations – digital file (PDF)
- Bid Quantities and Cost Estimate – digital file (PDF)

10. Structural Design (3 Pedestrian Bridges)

Consultant will perform structural calculations and develop design plan sheets for three new pedestrian crossings to connect pedestrian trails over Pinhook Creek, over Fagan Creek, and over Huntsville Spring Branch (Figure 8). Bridge span lengths will vary, but it is anticipated that each bridge will span the respective waterway with a single span. It is further anticipated that the pedestrian bridges will be constructed using typical prefabricated spans and will not require architectural design.

Many pedestrian bridges of this size do not incorporate lighting, which may require electrical engineering services. If, through the urban planning process, it is decided that functional and/or aesthetic lighting is desired on the bridges, Consultant will incorporate lighting features into the design plans for the bridges. It is expected that planning and design necessary to bring electricity to the bridges will be performed by Huntsville Utilities and/or a third party.

Structural design plan sheets will be integrated into the overall project design plan set discussed in Task 8. It is anticipated that each bridge will require 8 plan sheets, including:

- General Plan and Elevation
- General Notes, Table of Quantities, Index of Sheets
- Foundation Layout & Typical Cross Section
- Superstructure (Truss) Details;
- Joint Details;
- Abutment Details; and
- Pile Details.

11. Structural Design (Railroad Bridge)

Consultant will perform structural calculations and develop design plan sheets for a new concrete railroad bridge at the Fagan Creek confluence with Pinhook Creek to replace the existing timber bridge. The existing timber bridge will be lengthened to approximately 440 feet. Based on recent discussions with Client and the consultant for the Huntsville and Madison County Railroad Authority (HMCRA), Consultant will design the bridge from scratch to comply with the general alignment, length, and structural concept proposed by the USCAE in the early 2000s. The bridge will be designed in general accordance with American Railway Engineering and Maintenance-of-Way Association (AREMA) standards and Norfolk Southern Railway specifications.

It is anticipated that the bridge will be a typical and functional concrete bridge that will not require architectural design, electrical engineering design, or lighting features. However, it is anticipated that the concrete bridge will include aesthetic features to complement the channel improvements and pedestrian trails. These features may include the use of special formwork, color additives, masonry facades, etc.

Structural design plan sheets will be integrated into the overall project design plan set discussed in Task 8. It is anticipated that the bridge will require 21 plan sheets, including

- General Plan and Elevation
- General Notes, Table of Quantities, Index of Sheets
- Foundation Layout & Typ. Cross Sec.
- Staging Details
- Demolition Details
- Abutment Details
- Pier Details
- Pile Details
- Precast Beam Details
- Curb/Rail Details
- Precast Pile Cap Details
- Framing Plan/SS Details

12. TIGER Grant Application

Consultant will work with Client to strategically develop the TIGER grant project proposal to ensure that the City meets grant eligibility criteria and is positioned to be highly competitive.

12.1. Project Advice and Guidance

There will be a number of questions that arise from local officials and project planners related to the eventual TIGER Grant. Consultant will be on-call to answer questions pertaining to TIGER Grant process and criteria with expert staff who are integrally familiar with TIGER Grants. It is anticipated that correspondence will involve phone calls and emails through the process.

12.2. Benefit Cost Analysis

Crafting a Benefit-Cost Analysis (BCA) is one of the most critical aspects of a TIGER grant application. An effective BCA requires the monetization of a variety of project costs and benefits, including metrics that may not be easily monetized. If there are significant metrics which are exceptionally difficult to monetize, these may be quantified in non-monetary terms. However there should be sufficient metrics that can be monetized to enable an effective evaluation by DOT.

Consultants approach to preparing the BCA will be to follow the TIGER BCA Resource Guide to provide supplemental information, standard monetized values and updates for preparing a portion of the BCA. Local demand forecasts will be used to calculate projected levels of use for the TIGER project.

The BCA will include an Executive Summary with a project matrix that describes the project and the expected changes with respect to infrastructure, population affected, expected economic benefits, and an analysis of benefits calculated. The costs to complete the project and operation and maintenance costs will also be included. All of the costs and benefit calculations will be summarized in a single spreadsheet. The spreadsheet will quantify, per TIGER guidance, both the benefits and costs for each year after the project's start date, and for a period of time of at least 20 years in the future, and include undiscounted net benefits, and benefits discounted at seven percent.

The body of the BCA report will measure costs and benefits of a proposed project against a baseline (a "base case" or a "no build" case). The analysis will also include costs associated with the proposed project and reasonable alternatives.

The BCA will adhere to TIGER guidance for calculating benefits from construction of trails or paths. Consultant will estimate the number of people taken off the roads and then calculate the corresponding benefits. There may also be transportation benefits to existing riders from being able to use a dedicated trail ("mobility benefits"). However, the methodology behind estimating these benefits (as well as bicycle recreational benefits) is not well developed nor widely accepted. As such, Consultant will limit this benefit to a qualitative discussion.

Consultant will incorporate costs directly connected to the proposed project in the BCA. Per TIGER BCA guidance, even if the TIGER Grant pays for only part of the project, but the project is indivisible (i.e., no one part of the project would have independent utility), then the applicant should compare the benefits of the whole project to the costs of the whole project. This should include any costs paid for by State, local, and private partners other than the Federal government. In Huntsville's case, the costs associated with channel expansion; in-channel pathway on bench that continues under bridges; retaining walls along channel margins, and local ramps leading down to pathway on bench; and top-of-bank walkways linking to Big Spring Canal and area attractions, as well as future opportunity sites, will be evaluated by Consultant with respect to including these costs as part of the BCA.

The TIGER BCA will require the City to discount future benefits and costs to present values using a real discount rate of seven percent, following guidance provided by Office of Management and Budget (OMB) in Circulars A–4 and A–94. Consultant will also provide an alternative analysis using a real discount rate of three percent.

Consultant will cite outside data sources used in the analysis to be as clear and transparent as possible so that USDOT review staff can fully understand the basic elements of the analysis and the way in which we derived cost estimates and a BCA.

12.3. Grant Application

Consultant will develop checklists and schedules for Client and technical staff in order to prepare an organized and complete application in an efficient manner. Consultant will work directly with Client during the grant writing process to provide constant feedback and guidance, including final edits and review of grant narratives and accompanying materials.

Consultant will prepare a TIGER Grant application on behalf of Client by compiling data, narratives, and statistics provided by Client and engineering design, cost information developed by the Consultant design team, and the BCA analysis discussed above.

12.4. Grant Advocacy Services

Once the grant proposal has been sent to USDOT, Consultant will assist Client with education and outreach for USDOT staff and elected officials through letters, phone calls and meetings in order to build support for the project and promote project selection.

It is anticipated that services discussed in Task 12 will support a grant application in the spring of 2016. If a second grant application is necessary in the spring of 2017, the vendor providing grant writing services may require additional funds.

SCHEDULE

The work defined herein shall begin upon receipt of a notice-to-proceed from the Client. A preliminary project timeline is presented in Figure 11. The proposed project schedule is based on numerous factors and is subject to change. The schedule assumes that Client will provide review and comment on deliverables within 2 calendar weeks.

A detailed project schedule will be developed in Microsoft Project. The schedule will be updated weekly and will be incorporated into the required monthly progress reports.

FEE

The scope of services is limited to the specific items addressed herein. Any additional work will be considered an extra service. A fee of $1,947,875 is proposed for the services presented herein. This fee estimate consists of $821,830 in labor effort, $37,490 in expenses, $954,939 in sub-consultant fees, and $81,780 in vendor fees.

A man-hour estimate is provided in Table 2. Labor effort for Prime and Sub-consultants will be charged on a time-and-materials not-to-exceed basis using the hourly rates indicated on the bill rate schedules included as Tables 3, 4, and 5.

Anticipated reimbursable expenses include, but are not limited to, travel for out-of-town project staff to performing field work or attending project meetings, shipping fees, reproduction fees, teleconference fees, vendors, etc.
Should Consultant anticipate any issues with completing tasks within budget, they will inform Client immediately.

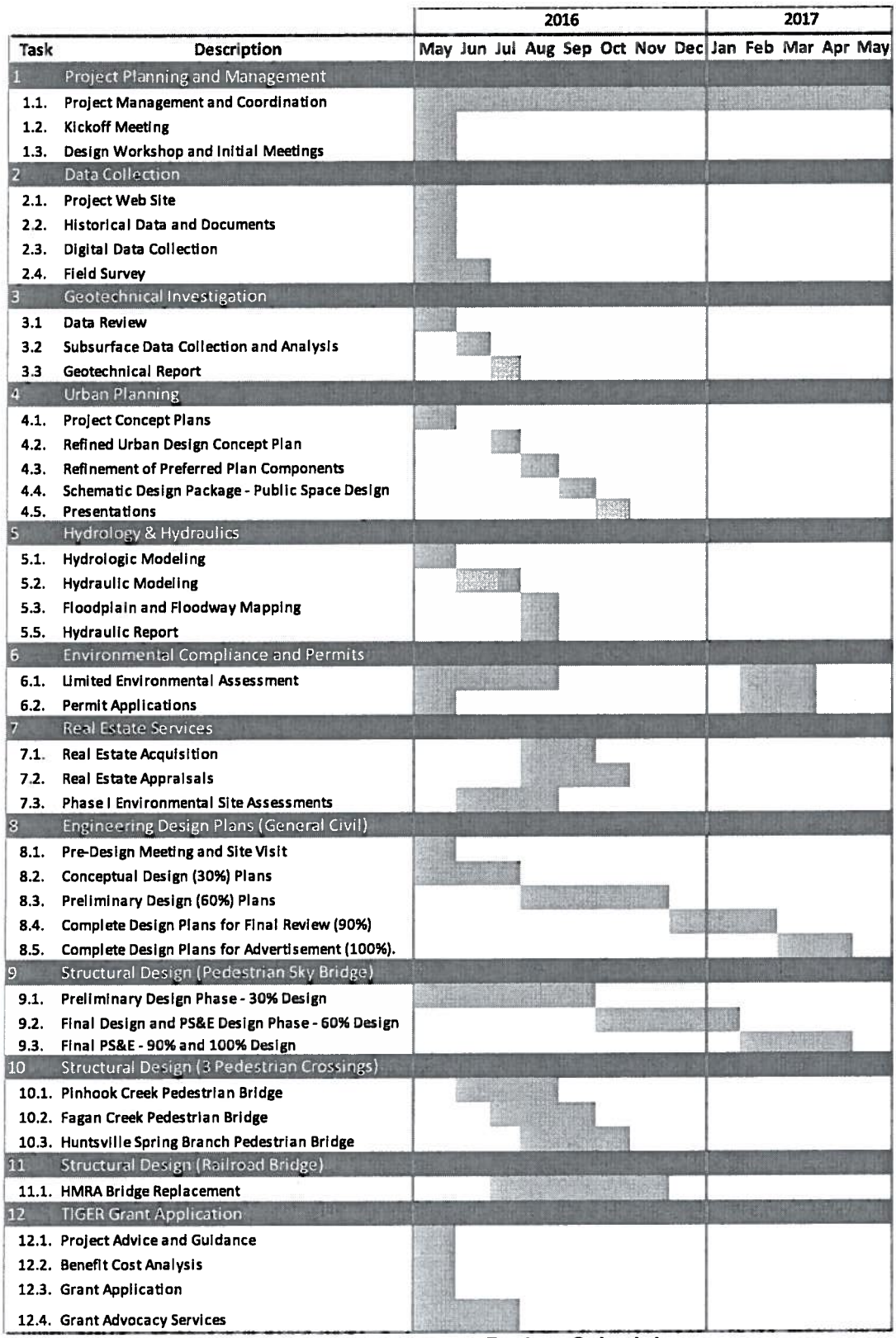


Figure 11.—Preliminary Project Schedule.

Table 2.—Man-hour Estimate.

Task	Description	Amec Foster Wheeler Total Hours	Amec Foster Wheeler Labor Fee	Amec Foster Wheeler Expense Fee	Rosales + Partners Total Hours	Rosales + Partners Labor Fee	Rosales + Partners Expense Fee	Urban Design Associates Total Hours	Urban Design Associates Labor Fee	Urban Design Associates Expense Fee	Vendor Cost Ferguson Group	Vendor Cost Tri-State Drilling	Vendor Cost GPRS	Total Project Fee
1	Project Planning and Management	516	$81,100	$2,138	206	$40,040		95	$18,950	$3,400				$148,748
1.1.	Project Management and Coordination	402	$63,810		206	$40,040								$105,852
1.2.	Kickoff Meeting	30	$4,350	$790										$5,140
1.3.	Design Workshop and Initial Meetings	84	$12,940	$1,348				95	$18,950	$3,400				$37,756
2	Data Collection	604	$52,210	$5,078										$57,288
2.1.	Project Web Site	8	$1,320											$1,320
2.2.	Historical Data and Documents	11	$1,690											$1,690
2.3.	Digital Data Collection	35	$4,290											$4,290
2.4.	Field Survey	550	$44,910	$5,078										$49,988
3	Geotechnical Investigation	366	$44,680	$18,533								$37,780		$102,882
3.1	Data Review	27	$3,900											$3,900
3.2	Subsurface Data Collection and Analysis	176	$19,460	$18,533								$37,780		$77,662
3.3	Geotechnical Report	163	$21,320											$21,320
4	Urban Planning	88	$12,000	$518				764	$133,040	$12,100				$164,915
4.1.	Project Concept Plans	48	$5,400					63	$9,800	$1,100				$16,845
4.2.	Refined Urban Design Concept Plan	8	$1,320					238	$42,840	$3,300				$49,767
4.3.	Refinement of Preferred Plan Components	8	$1,320					121	$22,400	$3,300				$28,305
4.4.	Schematic Design Package - Public Space Design	8	$1,320					310	$50,000	$3,300				$57,285
4.5.	Presentations	16	$2,640	$518				32	$8,000	$1,100				$12,713
5	Hydrology & Hydraulics	192	$27,880											$27,880
5.1.	Hydrologic Modeling	16	$2,640											$2,640
5.2.	Hydraulic Modeling	80	$13,200											$13,200
5.3.	Floodplain and Floodway Mapping	40	$5,280											$5,280
5.5.	Hydraulic Report	56	$6,760											$6,760
6	Environmental Compliance and Permits	332	$37,100	$1,176										$38,276
6.1.	Limited Environmental Assessment	172	$18,900	$658										$19,558
6.2.	Permit Applications	160	$18,200	$518										$18,718
7	Real Estate Services	793	$79,295	$4,864										$84,159
7.1.	Real Estate Acquisition	531	$49,605	$3,804										$53,409
7.2.	Real Estate Appraisals	8	$1,260											$1,260
7.3.	Phase I Environmental Site Assessments	254	$28,430	$1,060										$29,490
8	Engineering Design Plans (General Civil)	2200	$260,875	$5,183										$266,058
8.1.	Pre-Design Meeting and Site Visit	88	$13,480	$1,585										$15,065
8.2.	Conceptual Design (30%) Plans	504	$57,580	$680										$58,260
8.3.	Preliminary Design (60%) Plans	514	$57,970	$680										$58,650
8.4.	Complete Design Plans for Final Review (90%)	738	$90,605	$2,039										$92,644
8.5.	Complete Design Plans for Advertisement (100%).	356	$41,240	$200										$41,440
9	Structural Design (Pedestrian Sky Bridge)	66	$10,750		4547	$729,409	$18,000						$4,000	$799,729
9.1.	Preliminary Design Phase - 30% Design	18	$2,830		1009	$173,103	$12,000							$197,188
9.2.	Final Design and PS&E Design Phase - 60% Design	24	$3,960		1652	$260,959	$3,000						$4,000	$285,317
9.3.	Final PS&E - 90% and 100% Design	24	$3,960		1886	$295,347	$3,000							$317,225
10	Structural Design (3 Pedestrian Crossings)	824	$105,480											$105,480
10.1.	Pinhook Creek Pedestrian Bridge	344	$44,580											$44,580
10.2.	Fagan Creek Pedestrian Bridge	240	$30,450											$30,450
10.3.	Huntsville Spring Branch Pedestrian Bridge	240	$30,450											$30,450
11	Structural Design (Railroad Bridge)	808	$104,180											$104,180
11.1.	HMRA Bridge Replacement	808	$104,180											$104,180
12	TIGER Grant Application	40	$6,280								$40,000			$48,280
12.1.	Project Advice and Guidance	8	$1,320								$10,000			$11,820
12.2.	Benefit Cost Analysis	16	$2,320								$15,000			$18,070
12.3.	Grant Application	16	$2,640								$10,000			$13,140
12.4.	Grant Advocacy Services										$5,000			$5,250
	Totals	6829	$821,830	$37,491	4753	$769,449	$18,000	859	$151,990	$15,500	$40,000	$37,780	$4,000	$1,947,875
	Totals by Firm (Fee)		$859,321			$787,449			$167,490		$40,000	$37,780	$4,000	
	Totals by Firm (Fee Percent of Total)		47%			40%			9%		2%	2%	0.2%	
	Average Hourly Bill Rate		$120			$162			$177					

ATTACHMENT 2 - ALABAMA IMMIGRATION ACT - REPORT OF OWNERSHIP FORM

CITY OF HUNTSVILLE, ALABAMA REPORT OF OWNERSHIP FORM

A. **General Information.** Please provide the following information:

- Legal name(s) (include "doing business as", if applicable): Amec Foster Wheeler Environment & Infrastructure, Inc.
- City of Huntsville current taxpayer identification number (if available): _____. (Please note that if this number has been assigned by the City and if you are renewing your business license, the number should be listed on the renewal form.)

B. **Type of Ownership.** Please complete the un-shaded portions of the following chart by checking the appropriate box below and entering the appropriate Entity I.D. Number, if applicable (for an explanation of what an entity number is, please see paragraph C below):

Type of Ownership *(check appropriate box)*	Entity I. D. Number & Applicable State
☐ Individual or Sole Proprietorship	Not Applicable
☐ General Partnership	Not Applicable
☐ Limited Partnership (LP)	Number & State:
☐ Limited Liability Partnership (LLP)	Number & State:
☐ Limited Liability Company (LLC) (Single Member)	Number & State:
☐ LLC (Multi-Member)	Number & State:
☒ Corporation	Number & State: 917-644 Nevada
☐ Other, please explain:	Number & State (if a filing entity under state law):

C. **Entity I.D. Numbers.** If an Entity I.D. Number is required and if the business entity is registered in this state, the number is available through the website of Alabama's Secretary of State at: [illegible] under "Government Records". If a foreign entity is not registered in this state please provide the Entity I.D. number (or other similar number by whatever named called) assigned by the state of formation along with the name of the state.

D. **Formation Documents.** Please note that, with regard to entities, the entity's formation documents, including articles or certificates of incorporation, organization, or other applicable formation documents, as recorded in the probate records of the applicable county and state of formation, ***are not required unless:*** (1) specifically requested by the City, or (2) an Entity I.D. Number is required and one has not been assigned or provided.

Please date and sign this form in the space provided below and either write legibly or type your name under your signature. If you are signing on behalf of an entity please insert your title as well.

Signature: Steven D. Stewart Title (if applicable): Sr. Project Manager

Type or legibly write name: Steven D. Stewart Date: 5/7/15

ATTACHMENT 3
CITY OF HUNTSVILLE STANDARDS AND DESIGN GUIDES

1. City of Huntsville Standard Specifications for Construction of Public Improvements. Contract Projects, 1991.

2. City of Huntsville Engineering Standards, 1991.

3. City of Huntsville Design and Acceptance Manual for Force Mains and Pump Stations, 2011.

4. City of Huntsville Design and Acceptance Manual for Sanitary Sewers, 2011.

5. Alabama Department of Transportation Standard Specifications for Highway Construction, Current Edition.

6. City of Huntsville Subdivision Regulations, 1991.

ATTACHMENT 4
DESIGN REVIEWS

0% COMPLETE – PRE-DESIGN CONFERENCE

The ENGINEER shall meet with the OWNER at a 0% complete - Pre-Design Conference. The OWNER's representative (Project Engineer) will be introduced.

CONFERENCE FORMAT

The pre-design meeting will we initiated by the OWNER. The purpose of the conference will be to give the ENGINEER an opportunity to discuss the design of the PROJECT, to visit the PROJECT site, to receive copies of OWNER -furnished documents, if applicable, and to meet the OWNER'S Project Engineer and other personnel working on the PROJECT.

ATTENDEES: (Required)

- ENGINEER
- ALDOT (as appropriate for the type of project)
- Real Estate
- Landscape Management
- Utilities
- Traffic Engineering
- Planning

DISCUSSION TOPICS :

- Authority of OWNERS representative (Written submittal made to the ENGINEER)
- Scope of Work
- Time Requirements
- Budget Restraints
- Testing Requirements
- Permit Responsibilities
- Design criteria
- LC&E requirements
- Plan Requirements
- Special Conditions
- Utility Project Notification and a list of all utilities that need to be contacted.
- Tree Ordinance

REQUIRED SUBMITTALS TO THE PROJECT ENGINEER

1. A Certificate of Insurance for the ENGINEER and the ENGINEER's sub-consultants shall be submitted to the OWNER's PROJECT ENGINEER per Section 10.6.

2. Prior to the Pre-Design Conference, a completed **draft** design criteria document shall be prepared to the best of the ENGINEER'S ability and in conformance with his fee proposal and will serve as the basis of a discussion topic during the Pre-Design Conference. A **final** version of the design criteria based upon discussion during the meeting shall be prepared by the ENGINEER and distributed with the meeting minutes. A copy of a design criteria format may be found on the City of Huntsville web site at http://www.huntsvilleal.gov/engineering/index.php.

3. Within seven (7) calendar days of the 0% Complete - Pre-Design Conference, the ENGINEER shall submit to the OWNER's Project Engineer two color copies and an electronic copy of a schedule in Microsoft Projects format showing the critical path and indicating the time frame for the required milestone events and submittals outlined in this document. The schedule shall support a PROJECT completion date in accordance with the Period of Services in Article 6. When approved, a baseline of the schedule shall be saved from which variances in the schedule can be measured and evaluated.

ATTACHMENT 4
DESIGN REVIEWS

30% COMPLETE – CONCEPTUAL DESIGN

This design review is to show the OWNER how the functional and technical requirements will be met, to indicate the ENGINEER's approach to the solution of technical problems, to show compliance with design criteria or to justify noncompliance and to provide an estimate of probable cost. A field review shall be conducted at this juncture with the OWNER's staff and the ENGINEER to review the proposed field alignment of the PROJECT.

CONFERENCE FORMAT

ATTENDEES: (Required)

- Real Estate
- Landscape Management
- Utilities
- Traffic Engineering
- Planning
- City of Huntsville Construction Project Manager
- City of Huntsville Inspector
- City of Huntsville Environmental Representative

DISCUSSION TOPICS:

- ENGINEER presents recommended design/solutions along with other options and alternatives considered.
- ENGINEER presents updates on progress of permitting requirements
- ENGINEER presents progress on coordination with other project participants such as the State of Alabama, sub consultants, etc.
- ENGINEER presents budgetary constraints

REQUIRED SUBMITTALS TO THE PROJECT ENGINEER

1. A preliminary list of all permits to be obtained with associated fees.
2. An updated schedule in Microsoft Projects format showing the critical path shall be submitted.
3. Two color copies and an electronic copy of an updated schedule in Microsoft Projects format showing the critical path shall be submitted.
4. One (1) complete set of all approved permits including Location, Character, and Extent.

ATTACHMENT 4
DESIGN REVIEWS

60% COMPLETE – PRELIMINARY DESIGN CRITERIA

The review of the PROJECT at this point is primarily to insure that funding limitations are not being exceeded and to insure that the contract documents, design analysis and cost estimates are proceeding in a timely manner, and that the design criteria and previous review comments are being correctly interpreted. An additional review may be required by the OWNER to review changes proposed from previous submittals.

CONFERENCE FORMAT

ATTENDEES: (Required)

- Real Estate
- Landscape Management
- Utilities
- Traffic Engineering
- Planning
- City of Huntsville Construction Project Manager
- City of Huntsville Inspector
- City of Huntsville Environmental Representative

DISCUSSION TOPICS:

- Additional land acquisition needs, as required.
- Utility Project Notification and a list of all utilities that need to be contacted.
- Technical specifications for special construction items not covered under standard specifications or deviations from standard specifications.
- Update on progress of permitting requirements.
- Erosion control plan requirements, if required by the OWNER.
- Budget constraints.
- Progress on coordination with other project participants such as the City of Huntsville Real Estate Officer (Engineering Department), State of Alabama, sub consultants, etc.

REQUIRED SUBMITTALS TO THE PROJECT ENGINEER

1. One full size print copy and one ½ size print copy of all drawings that have incorporated previous comments shall be submitted. Plan/Profile drawings shall be 75% complete. Right-of way drawings shall be 100% complete at this submittal (reference Real Estate Division Plan Requirements Section entitled DRAWINGS, included at the end of this proposal)

2. An update to the schedule in Microsoft Projects format showing the critical path shall be submitted.

3. Unless determined to be inapplicable by the OWNER, Hydraulic reports 75% complete, shall be submitted.

4. Three (3) copies of preliminary plans for utilities shall be submitted.

5. Legal descriptions for takings shall be submitted. The information shall be 100% complete. (reference Real Estate Division Plan Requirements Section entitled DESCRIPTIONS, included at the end of this proposal)

6. Traffic Control Plan, if required. Plan shall be 60% complete at this submittal.

7. Detailed preliminary construction cost estimate shall be submitted.

8. Results of geotechnical investigations shall be submitted.

9. A list of comments made at the 30% review and a summary of each resolution.

10. Two color copies and an electronic copy of an update to the schedule in Microsoft Projects format showing the critical path shall be submitted.

ATTACHMENT 4
DESIGN REVIEWS

90% COMPLETE – FINAL REVIEW

The review of this submittal is to ensure that the design is in accordance with directions provided the ENGINEER during the design process.

CONFERENCE FORMAT

DISCUSSION TOPICS

Discussion topics will be handled open forum.

REQUIRED SUBMITTALS TO THE PROJECT ENGINEER

1. One full size print copy and one ½ size print copy of all drawings that have incorporated previous comments shall be submitted. Submittals include Plan/Profile drawings, Construction Details, Detailed cross-sections with cut and fill quantities and storm and sanitary sewer crossings, Erosion control plan, if required, Technical specifications, Right-of way drawings, Traffic Control Plan, Plans for Utilities, Signed Acceptance of Utility Project Notification Form by all affected parties, Design Calculations, and a final cost estimate. All submittals shall be 100% complete.
2. Any changes to Land Acquisition needs shall be identified and Legal descriptions for the changes shall be submitted.
3. A list of comments made at the 60% review and a summary of each resolution.
4. Calculations showing how quantities were determined for each bid item and how the item is to be measured in the field and paid. Three bound copies of corrected quantity calculations to match bid quantities. The following shall be required for each item:
    - Item Number
    - Item Description with standard specification used
    - Detailed calculation to include all measurements, conversion factors, and "standard" weights used
    - Final "calculated" amount and any "increased" amounts
    - Notes to include any deviation from referenced standard specifications

ATTACHMENT 4
DESIGN REVIEWS

100% COMPLETE – READY TO ADVERTISE

After the 90% review, the ENGINEER shall revise the construction documents by incorporating any comments generated during the previous design reviews. The ENGINEER shall prepare final hard copy contract specifications, prepare a bid form, and update the cost estimate as necessary.

ATTACHMENT 5 - ENGINEERS PERSONNEL FEE SCHEDULE

Table 3.—Amec Foster Wheeler Schedule of Fees

AMEC FOSTER WHEELER ENVIRONMENT & INFRASTRUCTURE, INC.

2016 RATE SCHEDULE

The hourly labor rates set forth below are valid from January 1, 2016 and will remain in effect through the duration of the contract.

PROFESSIONAL SERVICES

CLIENT agrees to reimburse Amec Foster Wheeler for all hours worked by professionals at the following classifications and associated hourly labor rates. For expert witness testimony and related services in connection with litigation, CLIENT agrees to reimburse Amec Foster Wheeler for all hours worked by professionals at the following classifications, but at one and one half times the associated hourly labor rates.

CLASSIFICATION	RATE/HOUR	CLASSIFICATION	RATE/HOUR
Professional Levels 1	$55.00	Professional Level 19	$165.00
Professional Levels 2	$60.00	Professional Level 20	$170.00
Professional Levels 3	$65.00	Professional Level 21	$180.00
Professional Level 4	$70.00	Professional Level 22	$190.00
Professional Level 5	$75.00	Professional Level 23	$200.00
Professional Level 6	$80.00	Professional Level 24	$210.00
Professional Level 7	$85.00	Professional Level 25	$220.00
Professional Level 8	$90.00	Professional Level 26	$240.00
Professional Level 9	$95.00	Professional Level 27	$250.00
Professional Level 10	$100.00	Professional Level 28	$260.00
Professional Level 11	$105.00	Professional Level 29	$270.00
Professional Level 12	$110.00	Professional Level 30	$280.00
Professional Level 13	$115.00	Professional Level 31	$290.00
Professional Level 14	$120.00	Professional Level 32	$300.00
Professional Level 15	$130.00	Professional Level 33	$310.00
Professional Level 16	$140.00	Professional Level 34	$320.00
Professional Level 17	$145.00	Professional Level 35	$330.00
Professional Level 18	$150.00		

TECHNICIAN SERVICES

CLIENT agrees to reimburse Amec Foster Wheeler for all hours worked by technicians at the following classifications and associated hourly labor rates.

CLASSIFICATION	RATE/HOUR	OVERTIME	CLASSIFICATION	RATE/HOUR	OVERTIME
Technician Level 1	$27.50	$41.25	Technician Level 16	$85.00	$127.50
Technician Level 2	$30.00	$45.00	Technician Level 17	$90.00	$135.00
Technician Level 3	$32.50	$48.75	Technician Level 18	$95.00	$142.50
Technician Level 4	$35.00	$52.50	Technician Level 19	$100.00	$150.00
Technician Level 5	$37.50	$56.25	Technician Level 20	$105.00	$157.50
Technician Level 6	$40.00	$60.00	Technician Level 21	$110.00	$165.00
Technician Level 7	$42.50	$63.75	Technician Level 22	$115.00	$172.50
Technician Level 8	$45.00	$67.50	Technician Level 23	$120.00	$180.00
Technician Level 9	$47.50	$71.25	Technician Level 24	$125.00	$187.50
Technician Level 10	$55.00	$82.50	Technician Level 25	$130.00	$195.00
Technician Level 11	$60.00	$90.00	Technician Level 26	$135.00	$202.50
Technician Level 12	$65.00	$97.50	Technician Level 27	$140.00	$210.00
Technician Level 13	$70.00	$105.00	Technician Level 28	$145.00	$217.50
Technician Level 14	$75.00	$112.50	Technician Level 29	$150.00	$225.00
Technician Level 15	$80.00	$120.00			

ADMINISTRATIVE SERVICES

CLIENT agrees to reimburse Amec Foster Wheeler for all hours worked by administrative staff at the following classifications and associated hourly labor rates.

CLASSIFICATION	RATE/HOUR	OVERTIME	CLASSIFICATION	RATE/HOUR	OVERTIME
Administrative Level 1	$35.00	$52.50	Administrative Level 8	$70.00	$105.00
Administrative Level 2	$40.00	$60.00	Administrative Level 9	$75.00	$112.50
Administrative Level 3	$45.00	$67.50	Administrative Level 10	$80.00	$120.00
Administrative Level 4	$50.00	$75.00	Administrative Level 11	$85.00	$127.50
Administrative Level 5	$55.00	$82.50	Administrative Level 12	$90.00	$135.00
Administrative Level 6	$60.00	$90.00	Administrative Level 13	$100.00	$150.00
Administrative Level 7	$65.00	$97.50	Administrative Level 14	$110.00	$165.00

OTHER DIRECT EXPENSES

CLIENT agrees to reimburse Amec Foster Wheeler for all other direct expenses incurred at the following rates, except as otherwise specified by Amec Foster Wheeler in its proposal:

Travel Expenses: Transportation (mileage, air travel, car rental, etc.), lodging, meals, & incidental expenses	Cost
Subcontract Expenses: Supplies or services furnished to Amec Foster Wheeler in support of project activities by any supplier or firm, except temporary agency or consultant staff charged at above hourly rates	Cost plus 5%
Direct Expenses: Other expenses in support of project activities	Cost

Table 4.—Rosales + Partners Schedule of Fees

Classification	Rate/Hour
Principal in Charge	$220.00
Project Manager	$220.00
Senior Engineer	$165.00
Engineer	$151.25
AE	$132.00
ET	$106.59

Table 5.—Urban Design Associates Schedule of Fees

Classification	Rate/Hour
Principal I	$250.00
Principal II	$225.00
Principal III	$200.00
UD Project Manager I	$175.00
UD Project Manager II	$160.00
Arch Project Manager I	$145.00
Senior Illustrator	$200.00
Senior Designer I	$140.00
Designer II	$120.00

ATTACHMENT 6 - PROGRESS REPORT
(Article 8)

PROGRESS REPORT NO. _____ FOR MONTH AND YEAR _____

PROJECT _____ PROJECT NO. _____

DATE _____ CITY'S PROJECT ENGINEER _____

CONSULTANT _____CONSULTANT'S PROJ. MAN. _____

CURRENT MONTH % COMPLETE: _____ PREV. MONTH % COMPLETE: _____

ATTACH A "SHOULD HAVE STARTED TASKS REPORT" AND A "SLIPPING TASKS REPORT" FROM MICROSOFT PROJECTS THAT LISTS ALL ACTIVITY THAT IS BEHIND SCHEDULE.

ATTACH A "TASKS STARTING SOON" REPORT FROM MICROSOFT PROJECTS WITH A DATE RANGE OF THIRTY (30) DAYS AFTER THE DATE OF THIS PROGRESS REPORT.

STATE WHAT ACTION IS BEING TAKEN TO BRING PROJECT BACK TO SCHEDULE:

_____

_____

_____

MILESTONE SUBMITTALS	SCHEDULED DATE	ACTUAL DATE
30%	_____	_____
60%	_____	_____
90%	_____	_____
100%	_____	_____
"FINAL" INVOICE SUBMITTED		_____
SUBCONSULTANTS PAID IN FULL		_____
CONTRACTED COMPLETION DATE:	May 31, 2017	_____

(These scheduled dates shall be agreed upon at the beginning of the project (Attachment 4) with the Project Engineer and noted monthly on each progress report. The scheduled contract completion date shall not be changed except by contract change order. Changes to the scheduled milestone submittal dates shall be accompanied by a new project schedule approved by the OWNER'S Project Engineer.)

UPDATED SCHEDULE ATTACHED? _____ YES _____ NO
*If yes, send an electronic copy to the Project engineer

COMMENTS:

_____

_____

_____

This progress report (4 copies) shall be submitted monthly. Scheduled completion dates will not be extended without a contract modification.

CERTIFICATION: I certify that the stated information is true and accurate to the best of my knowledge.

_____ _____

CONSULTANT DATE CITY PROJECT ENGINEER DATE

ATTACHMENT 7 - SUB CONSULTANTS ENGAGED BY THE ENGINEER
(Article 9.2)

CONSULTANT NAME AND ADDRESS	DESCRIPTION OF SERVICES	FEE
Rosales + Partners	Planning and Design of Pedestrian Sky Bridge	$787,449.00
Urban Design Associates	Urban Planning, Project Master Plan, Community Outreach and Engagement	$167,490.00
The Ferguson Group	TIGER Grant Application, Benefit Cost Analysis, Grant Advocacy Services	$40,000.00
Tri-State Drilling	Subsurface Expoloration	$37,780.00
Ground Penetrating Radar Systems	Utility location	$4,000.00
	SUB-TOTAL	$1,036,719.00
	5% Administrative Fee	$51,835.95
	TOTAL	$1,088,554.95

ATTACHMENT 8 - CONTRACT DOCUMENT REQUIREMENTS LIST

REQUIREMENT	SUBMIT TO	SUBMITTAL REQUIREMENT DATE	NUMBER OF COPIES	REFERENCE SECTION OF CONTRACT AND COMMENTS
Deviations from OWNER's standards.	OWNER	Prior to incorporating deviations.	2	Article 2.5
Products or materials specified by the ENGINEER that are available from only one source.	OWNER	Prior to 100% submittal.	2	Article 2.2
ADA grades, elevations and layout	OWNER	90% review, 100% complete	2	Article 2.6
Approval of ENGINEER's Request for Payment.	OWNER	Within ten (10) days of receipt of the request from the ENGINEER.	N/A	Article 3.4
Approval of ENGINEER submittals	OWNER	So as to cause no delay to the ENGINEER or the PROJECT.	N/A	Article 3.8
Change order changes that reduce construction requirements.	OWNER	Prior to authorizing a change.	N/A	Article 3.11
Any information pertaining to any claim.	OWNER	Immediately	2	Article 3.12
Information pertinent to the PROJECT, all criteria and full information as to OWNER's requirements, copies of all design and construction standards.	ENGINEER	So as to not delay the services of the ENGINEER.	2	Article 5.1, 5.2
Notification of delays.	ENGINEER; OWNER	Promptly	4	Article 6.1
ENGINEER's monthly invoices.	OWNER	Monthly	4	Article 8.1.1
Consultant progress report.	OWNER	Monthly	4	Article 8.1.1
Records, data, parameters, design calculations and other information.	OWNER	Cancellation of contract.	2	Article 9.7
Documentation, records of reimbursable expenses, record copies of all written communications, and any memoranda of verbal communications related to the PROJECT.	OWNER	Upon notice from the OWNER.	2	Article 9.4
Termination notification.	OWNER or ENGINEER	7 days prior to termination.	2	Article 9.10 & 9.11
Certificate of Insurance for ENGINEER.	OWNER	At 0% design conference	1	Article 10.2(B), 10.6, and Attachment 4.

Insurance cancellation, suspension, or reduction in coverage or limits.	OWNER	30 days prior to effective date except for cancellation which is 10 days notification.	1	Article 10.4(A)
Certificate of insurance for sub consultants/subcontractors.	OWNER	At 0% design conference.	1	Article 10.7
A schedule in Microsoft Projects format showing the critical path.	Project Engineer	Within 7 calendar days of Pre-design conference, 30% complete design review. 60% design review. Attachment 6	1 hard; 1 digital	Attachment 4
Drawings.	Project Engineer	30% complete design review, 60% design review, 90% review, and 100% complete.	3	Attachment 4
Cost estimate.	Project Engineer	30% complete design review, 60% review, 90% review, and 100% complete.	3	Attachment 4
Hydraulic reports.	Project Engineer	60% design review.	2	Attachment 4
Preliminary plans for utilities.	Project Engineer	60% design review.	3	Attachment 4
Real Estate Deliverables	Project Engineer	60% design review, 90% review, 100% complete.	Reference Real Estate Division Plan Requirements	Attachment 4, 14 Real Estate Plan Requirements at end of this proposal document
Traffic Control plan.	Project Engineer	60% design review.	N/A	Attachment 4
Results of geotechnical investigations.	Project Engineer	30% design review.	2	Attachment 4
Technical specifications.	Project Engineer	90% review, 100% complete.	N/A	Attachment 4
Relocation of Utilities	Project Engineer	0% review – list of all utilities that need to be contacted 60% review – from all affected parties 90% review – Signed Acceptance Utility Project Notification Form	2	Attachment 4, 10
Design Calculations	Project Engineer	90% review, 100% complete	1	Attachment 4
Digital copy of drawings.	Project Engineer	100% complete – 1 in .dgn format; 1 in .tiff or .pdf format	2	Attachment 4
Digital text files.	Project Engineer	100% complete.	1	Attachment 4
Bid Quantities.	Project Engineer	100% complete. Digital in Excel 2003 format and hard copy	3	Attachment 4
Permits and Permit Applications	Project Engineer	100% complete.	1	Attachment 4
Field notes.	Project Engineer	100% complete.	1	Attachment 4
Digital aerial photography.	Project Engineer	100% complete.	1	Attachment 4

Progress Report (Art. 8)	Project Engineer	30% complete design review, 60% design review, 90% design review, 100% completion stage.	4 hard; 1 digital monthly	Attachment 4

ATTACHMENT 9 - REQUIREMENTS FOR DOCUMENT SUBMITTALS

DRAWINGS

All drawings shall be sized 24" x 36", unless otherwise approved by the OWNERS Project Engineer.

Title blocks shall as a minimum, contain the name of the project, date, city project number, and ENGINEER's name. The title block of drawings shall contain a space for the names of the preparer and the reviewer and/or checker. These blocks shall be signed on each submittal (See Attachment "11" for sample standard drawing format). Drawings shall contain alphanumeric revision designations. Drawings issued for review shall be issued with alpha revision designation and the revision letter shall be changed for each submittal containing drawing changes. Drawings issued for construction shall be issued with numeric designation at revision level "0" and described as "Issued for Construction" in the revision description block. Subsequent drawing changes require the revision level to be raised using successively higher numbers and the changes to be marked by circling and briefly described in a revision block.

All drawings shall be prepared in Micro station .DGN format, unless otherwise approved by the OWNERS Project Engineer. Transmittal letters shall consist of a list of files being submitted, a description of the data in each file, and a level/layer schematic of each design file. DGN design files shall have working units as follows: master units in feet, no sub-units, and 1,000 positional units. All data submitted shall use NAD 1983 Alabama East Zone horizontal datum and NAVD 88 vertical datum coordinates.

Unless otherwise specified by the Owners Project Engineer, all drawings for review submittals shall be full or half-size copies. All documents shall be clearly marked in a revision block indicating the applicable submittal milestone, i.e. 30%, 60%, 90%, etc.

OTHER DOCUMENTS

Submittals required by the State of Alabama for their review, bidding, etc., shall be of the size, form and numbers of copies as the state may require even though such submittals may differ from the submittals set forth as being required elsewhere in this Agreement.

Digital files shall be submitted by 4-3/4" CD ROM, DVD, 3 and 1/2 inch floppy disk, flash drive, or to the City of Huntsville F.T.P. site.

All print copies shall be first generation copies.

All text documents shall be prepared in Microsoft Word 2010 format.

All spreadsheets shall be in Microsoft Excel 2010 format.

All PDF files shall be searchable.

Schedules shall be in Microsoft Projects format, unless otherwise approved by the OWNERS Project Engineer.

Aerial photography files shall be in Intergraph (.COT) or (.tiff) format.

All mapping shall meet National Map Accuracy Standards unless otherwise noted. If National Map Accuracy Standards are not met, the accuracy of the map shall be identified to the Owners Project Engineer and on the maps derived from the aerial survey. National Map Accuracy Standards are shown below. This and other map standards are shown in Department of the Army, US Army Corps of Engineers standard, "EM 1110-1-1000, Engineering and Design - Photogrammetric Mapping".

All final drawings, specifications, plans, calculations, letters containing Engineering or Surveying recommendations or other Engineering or Land Surveying papers or documents involving the practice of engineering or land surveying as defined by Code of Alabama, Title 34, Chapter 11 shall be sealed, dated, and bear the signature of the person who prepared or approved them.

Working drawings or other documents shall contain a statement to the effect "Preliminary-Not for construction, recording purposes or implementation."

ATTACHMENT 10 – UTILITY PROJECT NOTIFICATION FORM

NAME:_____
(Utility Name)

PROJECT NAME: _____ **PROJECT NUMBER:**_____

CONSULTING ENGINEER: _____
(Name)

ENGINEERING REPRESENTATIVE_____**PHONE:**_____

I have reviewed design drawings or other information as available, and:

DO _____ **DO NOT** _____

have facilities that will require relocation. If relocation is required, a construction duration of _____ calendar days from the Notice to Proceed, is anticipated to be required for relocation.

LIST NAME(S) OF OTHER UTILITY(S) that share poles or facilities that have to be relocated prior to YOU starting your work:

NAME OF UTILITY:_____

NAME OF UTILITY:_____

NAME OF UTILITY: _____

OTHER: _____

COMMENTS: _____

BY: _____
AUTHORIZED REPRESENTATIVE

FIELD CONTACT PERSON: _____ **PHONE:** _____
OFFICE CONTACT PERSON: _____ **PHONE:**_____

DATE:_____

CONSTRUCTION PLANS FOR

PROJECT NAME

PROJECT INFORMATION

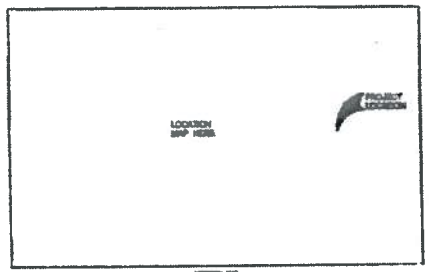
FOR THE

CITY OF HUNTSVILLE

HUNTSVILLE, ALABAMA

(PROJECT NO. XXXXXXXXX)

SAMPLE STANDARD DRAWING FORMAT



HUNTSVILLE
The Star of Alabama

INDEX OF DRAWINGS

SHEET NO.	TITLE

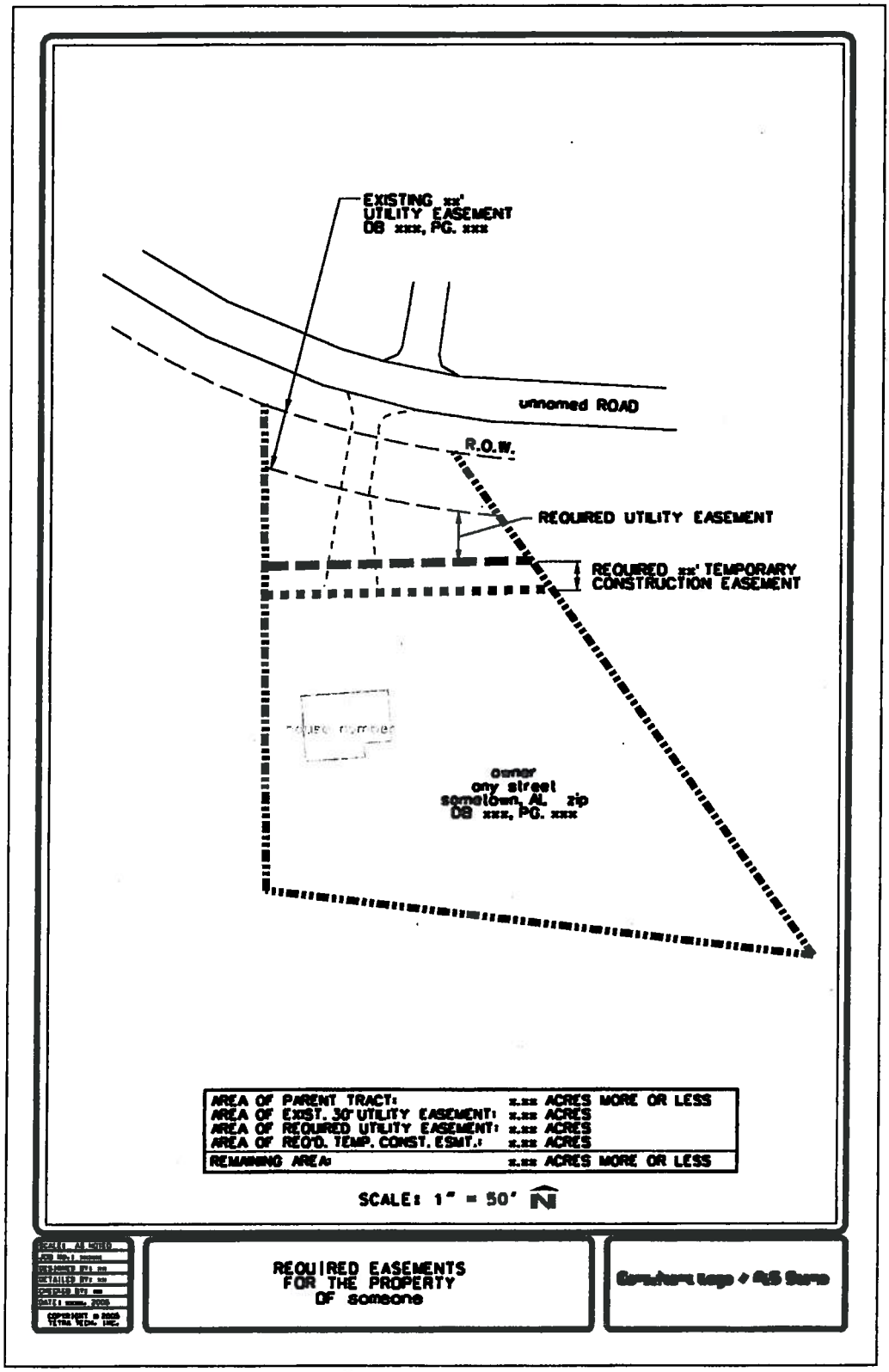
INDEX TO DRAWINGS SHALL BE PLACED ON COVER SHEET IF POSSIBLE, OTHERWISE IT SHALL BE THE SECOND SHEET IN THE SET.

TITLE SHEET

PROJECT NAME AND INFORMATION
CITY OF HUNTSVILLE

ATTACHMENT 11

ATTACHMENT 12
SAMPLE



...\easementtemplate_V7.dgn 3/17/2006 12:11:14 PM

ATTACHMENT 13

United States National Map Accuracy Standards

With a view to the utmost economy and expedition in producing maps which fulfill not only the broad needs for standard or principal maps, but also the reasonable particular needs of individual agencies, standards of accuracy for published maps are defined as follows:

1. ***Horizontal accuracy.*** *For maps on publication scales larger than 1:20,000, not more than 10 percent of the points tested shall be in error by more than 1/30 inch, measured on the publication scale; for maps on publication scales of 1:20,000 or smaller, 1/50 inch. These limits of accuracy shall apply in all cases to positions of well-defined points only. Well-defined points are those that are easily visible or recoverable on the ground, such as the following: monuments or markers, such as bench marks, property boundary monuments; intersections of roads, railroads, etc.; corners of large buildings or structures (or center points of small buildings); etc. In general what is well defined will be determined by what is plottable on the scale of the map within 1/100 inch. Thus while the intersection of two road or property lines meeting at right angles would come within a sensible interpretation, identification of the intersection of such lines meeting at an acute angle would obviously not be practicable within 1/100 inch. Similarly, features not identifiable upon the ground within close limits are not to be considered as test points within the limits quoted, even though their positions may be scaled closely upon the map. In this class would come timber lines, soil boundaries, etc.*

2. ***Vertical accuracy,*** *as applied to contour maps on all publication scales, shall be such that not more than 10 percent of the elevations tested shall be in error more than one-half the contour interval. In checking elevations taken from the map, the apparent vertical error may be decreased by assuming a horizontal displacement within the permissible horizontal error for a map of that scale.*

3. ***The accuracy of any map may be tested*** *by comparing the positions of points whose locations or elevations are shown upon it with corresponding positions as determined by surveys of a higher accuracy. Tests shall be made by the producing agency, which shall also determine which of its maps are to be tested, and the extent of the testing.*

4. ***Published maps meeting these accuracy requirements*** *shall note this fact on their legends, as follows: "This map complies with National Map accuracy Standards."*

5. ***Published maps whose errors exceed those aforestated*** *shall omit from their legends all mention of standard accuracy.*

6. ***When a published map is a considerable enlargement*** *of a map drawing (manuscript) or of a published map, that fact shall be stated in the legend. For example, "This map is an enlargement of a 1:20,000-scale map drawing," or "This map is an enlargement of a 1:24,000-scale published map."*

7. ***To facilitate ready interchange and use of basic information for map construction*** *among all Federal mapmaking agencies, manuscript maps and published maps, wherever economically feasible and consistent with the uses to which the map is to be put, shall conform to latitude and longitude boundaries, being 15 minutes of latitude and longitude, or 7.5 minutes, or 3-3/4 minutes in size.*

U.S. BUREAU OF THE BUDGET

ATTACHMENT 14

ENGINEERING DEPARTMENT - REAL ESTATE DIVISION
PLAN REQUIREMENTS

DRAWINGS:
Individual Parcels

- Each individual parcel 8 ½" x 14" (dgn or dxf format)
- Show Calculations
  - Before
  - After
  - Taking
- ***All Parcels shall be closed shapes (polygons).***
- Show Existing and Proposed Right-of-Way on each individual parcel map.
- Property Ownership

Overall Project Land Acquisition Maps

- Total project drawing in dgn or dxf format
- Indicate the following:
  - Stationing on Centerline
  - Existing Right-of-Way
  - Proposed Right-of-Way
  - Existing Easements
  - Proposed Easements
  - Existing Pavement
  - Proposed Pavement/Sidewalks/Structures
  - Existing Structures
  - Property Ownership

Color Standards *(SAMPLE)*

Description	Color	Line Style	Type
Existing ROW	Red	Medium Dashed	
Proposed ROW	Red	Solid	Closed Polygon
Existing Easements	Orange	Medium Dashed	
Proposed Easements	Orange	Solid	Closed Polygon
TCE	Pink	Solid	Closed Polygon

DESCRIPTIONS:

- Microsoft Word on 3.5" Diskette or CD
- Each Description shall be complete and independent (separate file).
- Hard Copies signed and stamped by PLS.

GENERAL:

- P.K. Nails or other permanent stationing markings shall be required.
- Re-staking of right-of-way or easements may be required (See Article 4).
- All survey plats to be on Alabama State Plane Datum. Strip Maps shall indicate at least 2 monuments in place with Alabama State Plane Coordinate values shown on each.
- Parcel plats and legal descriptions shall indicate the Alabama State Plane Coordinate NAD83 Alabama East Zone Value of the point of beginning.

ATTACHMENT 15 - GIS BASE MAP

DESIGN LEVEL	CONTENTS	LINE CODE	COLOR	WEIGHT	TEXT SIZE	FONT	CELL NAME
1	State Plane Coordinate Grid	0	0	0	20	0	
2	Benchmarks	0	0	0			
3	Private Street Text	0	105	0	20	0	
3	Street Text	0	3	0	20 (or 18)	0	
4	Street R/W	7	0	0			
5	Street Centerline	7	0	0			
6	Street Pavement	0	3	0			
6	Proposed Street Pavement	3	16	0			
6	Private Streets	0	105	0			
6	Proposed Private Road	3	105	0			
7	Parking Lots	1	3	1			
7	Private Lots used as Roads	1	105	1			
8	Secondary Roads--Private	2	105	0			
8	Secondary Roads	2	3	0			
8	Trails	3	3	0			
9	Secondary Roads/Trails Text	0	3	0	20	0	
10	Sidewalks	5	3	0			
11	Bridges/Culverts/Paved Ditches	0	0	0			
12	Hydrology - Major	6	1	0			
12	Hydrology – Minor, Ditches	7	1	0			
13	Hydrology - Text	0	1	0	25	23	
14	Tailings & Quarries, Athletic Fields/Text, misc. areas	0	1	0			
15	Greenways	3	48	0			
16	Speed Tables	0	3	0			TCALM
17	Railroad Tracks (Patterned)	0	2	0			RR
18	Railroad Text	0	2	0	25	0	
19	Railroad R/W	2	2	0			
20	Utility Poles (Cell)	0	5	0			P POLE
21	Utility Easements	3	5	0			
22	Utility Text	0	5	1			
23	Geographic Names	0	3	1			
24	Building Structures	0	0	0			
24	Pools and Text	0	1	0	10	1	
24	Future Site of Structures	2	0	0			STRUCT
24	Existing Structures (exact location and shape unknown)	2	0	0			STRCEX
25	Property Lines/ refuge bdy.	6	6	1	30	1	
26	Cadastral Polygons	6	6	0			
27	Ownership Text	0	6	1			
28	Cemeteries/Text	4	6	0	10	1	
29	Lot Numbers				25	0	
30	Block Numbers				30	0	
31	Addition Names	0	0	0	35	0	
32	Open						
33	Lot Ticks						

34	Lot Lines/Property Lines	6	6	0			
35	Trees/Hedge Rows	0	6	0	AS=1		TREES
36	GPS Monuments	0	5	0	18	23	CONTRL
37	2' Topo Contour						
38	5' Topo Contour	0	7	0			
39	25' Major Topo Contour	0	7	0			
40	X Spot Elevation	0	7	0			
41	FEMA Monuments/Labels	0	3/0	0	18	1	FEMA
42	Quarter Sections						
43	Section Lines	0	5	0			
44	Features	0	2	0			
44	Cell Towers	0	12	0	AS=1		CELTWR
45	Fences (Pattern)	0	8	0	AS=1		FENCE
46	Format/Legend	0	0	0			Limleg Madleg
47	Mass Points	0	7	2			
48	Break Lines	0	7	2			
49	Open						
50	Billboards	0	37	1			BBOARD
51	Sanitary Sewer	0		3			
52	Sanitary Sewer Text						
53	Storm Water Features	0		3			
54	Storm Water Text						
55	Open						
56	Property Address	0	1	0			
57	Text Tag for Buildings	0	1	0	10-20	1	
58	One Way Arrows	1	3	1			
59	Open						
60	Open						
61	Open						
62	Monuments for Setup (point cell)						
63	Open						

ATTACHMENT 16 – REQUIRED DELIVERABLES

Checklist must be submitted at 100% review and with final invoice.

This is a submittal only. **Return this sheet with submittal**

YES	NO	REQUIRED SUBMITTALS TO THE PROJECT ENGINEER
		1. Two (2) sets of complete construction drawing prints sized 24" x 36" sealed and marked "ISSUED FOR CONSTRUCTION". Drawings information shall be referenced to Alabama State Plane Coordinate system, NAD1983 Alabama East Zone as described in the Code of Alabama (1975), Section 35-2-1. Surveys shall be tied to a minimum of two accepted GPS monuments or one GPS tie point plus an astronomic observation to determine grid north or GPS Survey.
		2. One (1) Micro station digital and One (1) digital file in either .tiff or .pdf format of construction drawings (must be signed and sealed) – sized 11" x 17".
		3. Two (2) sets of right-of-way drawing prints sized 24" x 36" sealed and marked "ISSUED FOR CONSTRUCTION". Drawings information shall be referenced to Alabama State Plane Coordinate system. NAD1983 Alabama East Zone
		4. One (1) Micro station digital file of right-of-way drawings.
		5. Two (2) print sets of 8-1/2" x 11" legal descriptions for right-of-way (REVISED SETS ONLY)
		6. One (1) digital text file of legal descriptions for right-of-way (REVISED FILE ONLY)
		7. One (1) print copy of Final Construction Cost Estimate.
		8. One (1) digital spread sheet file of Final Construction Cost Estimate.
		9. Three (3) printed and bound copies of corrected quantity calculations to match Final Bid Quantities.
		10. One (1) digital spread sheet file (Excel 2003 format) of Final Bid Quantities.
		11. Two (2) print sets of contract specifications.
		12. One (1) digital text file of contract specifications.
		13. One (1) complete set of signed and sealed calculations.
		14. One (1) complete set of permits for COH signature and Engineer's submittal to include but not limited to USACE, ADEM NPDES NOI, ETC. This package will also include CBMPP, ALDOT Maintenance, ROW and utility permit Applications for ALDOT Funded Projects as required.
		15. One (1) complete set of all field notes.
		16. One (1) copy of digital aerial photography obtained for this PROJECT in (.tif) format, as necessary.
		17. Utility Project Notification forms and a list of all utilities that need to be contacted.

_____ Engineer